

REPORT CONTROL SYMBOL NADC-13920-2



DTIC QUALITY INSPECTED 2

STATISTICAL REVIEW OF COUNTING ACCELEROMETER DATA
FOR NAVY AND MARINE FLEET AIRCRAFT
FROM 1 JAN 1962 TO 30 JUN 1977

Alan M. Kaniss
Aircraft and Crew Systems Technology Directorate
NAVAL AIR DEVELOPMENT CENTER
Warminster, Pennsylvania 18974

1 NOVEMBER 1977

NADC
Tech. Info.

SEMI-ANNUAL SUMMARY REPORT
AIRTASK NO. A53530/202/78012-74-84
Work Unit No. DX 701

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

Prepared for
NAVAL AIR SYSTEMS COMMAND
Department of the Navy
Washington, D.C. 20331

19970605 010

NOTICES

REPORT NUMBERING SYSTEM - The numbering of technical project reports issued by the Naval Air Development Center is arranged for specific identification purposes. Each number consists of the Center acronym, the calendar year in which the number was assigned, the sequence number of the report within the specific calendar year, and the official 2-digit correspondence code of the Command Office or the Functional Directorate responsible for the report. For example: Report No. NADC-78015-20 indicates the fifteenth Center report for the year 1978, and prepared by the Systems Directorate. The numerical codes are as follows:

| CODE | OFFICE OR DIRECTORATE |
|------|---|
| 00 | Commander, Naval Air Development Center |
| 01 | Technical Director, Naval Air Development Center |
| 02 | Comptroller |
| 10 | Directorate Command Projects |
| 20 | Systems Directorate |
| 30 | Sensors & Avionics Technology Directorate |
| 40 | Communication & Navigation Technology Directorate |
| 50 | Software Computer Directorate |
| 60 | Aircraft & Crew Systems Technology Directorate |
| 70 | Planning Assessment Resources |
| 80 | Engineering Support Group |

PRODUCT ENDORSEMENT - The discussion or instructions concerning commercial products herein do not constitute an endorsement by the Government nor do they convey or imply the license or right to use such products.

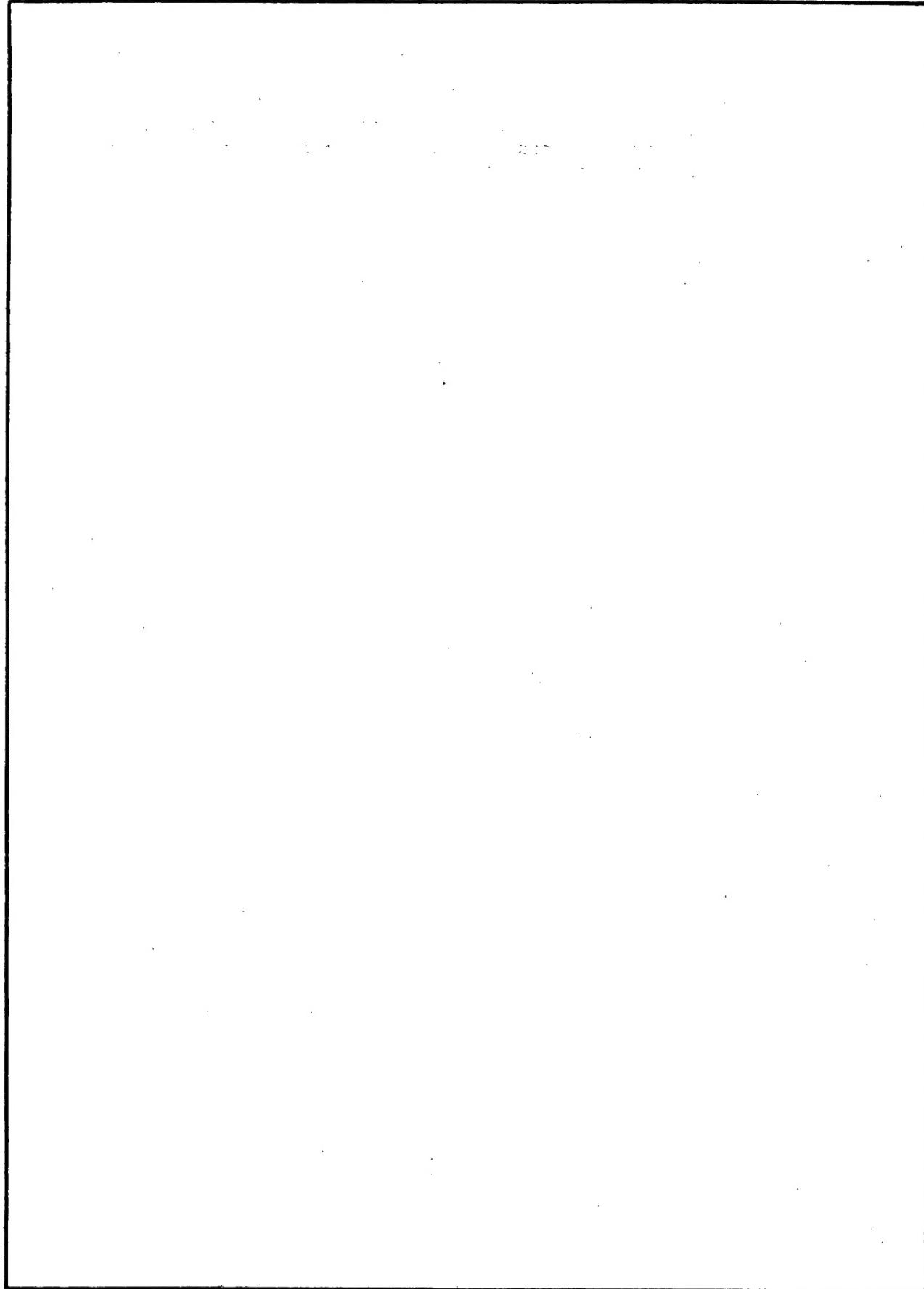
APPROVED BY: M. Passaglia, Jr. DATE: 1 November 1977
M. PASSAGLIA, JR.
Captain, USN
Deputy Director, ACSTD

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

| REPORT DOCUMENTATION PAGE | | READ INSTRUCTIONS BEFORE COMPLETING FORM |
|---|-----------------------|--|
| 1. REPORT NUMBER RCS NADC 13920-2 | 2. GOVT ACCESSION NO. | 3. RECIPIENT'S CATALOG NUMBER |
| 4. TITLE (and Subtitle) Statistical Review of Counting Accelerometer Data for Navy and Marine Fleet Aircraft from 1 Jan 1962 to 30 Jun 77 | | 5. TYPE OF REPORT & PERIOD COVERED Semi-Annual Summary Report from 1 Jan 1962 to 30 Jun 77 |
| | | 6. PERFORMING ORG. REPORT NUMBER |
| 7. AUTHOR(s) ALAN M. KANISS | | 8. CONTRACT OR GRANT NUMBER(s) |
| 9. PERFORMING ORGANIZATION NAME AND ADDRESS Naval Air Development Center Aircraft and Crew Systems Technology Directorate Warminster, PA 18974 | | 10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS AIRTASK A53530/202/78012-74-84/Work Unit No. DX 701 |
| 11. CONTROLLING OFFICE NAME AND ADDRESS Naval Air Systems Command Department of the Navy Washington, D.C. 20361 | | 12. REPORT DATE 1 November 1977 |
| 14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) | | 13. NUMBER OF PAGES 148 |
| | | 15. SECURITY CLASS. (of this report) UNCLASSIFIED |
| | | 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE |
| 16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited | | |
| 17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) | | |
| 18. SUPPLEMENTARY NOTES | | |
| 19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Counting Accelerometer Statistics; Calendar Time Separations; Training Navy; Combat Navy; Training Marine; Combat Marine | | |
| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report is a specialized summary of normal acceleration data recorded by counting accelerometers. Data are separated by calendar time and mission category. Only data reported in the counting accelerometer program are included. | | |

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)



SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

RCS NADC 13920-2

SUMMARY

This is a semi-annual progress report, and it presents a specialized summary of the data in the counting accelerometer program. Statistics describing Navy and Marine aircraft cumulative g-count exceedances are calculated and tabulated. These tabulations are separated by calendar time and into four major categories of fleet experience: Navy Training, Navy Combat, Marine Training, and Marine Combat.

These data show that the load rate distributions (counts at 1000 hours) for most models and most g-levels have a non-normal distribution. Within a model (F-4B, F-8H, etc.), differences in the average load rates exist when data are separated by calendar time or mission category.

RCS NADC 13920-2

SPECIAL NOTES

1. This report supersedes and replaces all previous issues of this semi-annual report. Previous issue was report control symbol NADC-13920-2, dated 1 May 1977.

2. Additional copies of this report may be obtained from:

Administrator
Defense Documentation Center for Scientific
and Technical Information (DDC)
Building 5, Cameron Station
Alexandria, Virginia 22314

3. Any inquiries, questions, or additional information desired concerning the contents of this report shall be directed to:

Commander
Naval Air Development Center (Code 6082)
Warminster, Pennsylvania 18974
Area Code 215-441-2051
Autowon 441-2051

RCS NADC 13920-2

TABLE OF CONTENTS

| | PAGE |
|--|------|
| SUMMARY. | 1 |
| SPECIAL NOTES. | 2 |
| INDEX OF CURRENTLY OPERATIONAL MODELS. | 4 |
| INDEX OF OUT-OF-SERVICE MODELS AND MODELS WHICH HAVE NOT REPORTED COUNTING ACCELEROMETER DATA DURING THE PREVIOUS 12 MONTHS | 6 |
| LIST OF SYMBOLS. | 7 |
| INTRODUCTION | 9 |
| DISCUSSION | 10 |
| TABLES | 13 |
| APPENDIX A - OUT-OF-SERVICE MODELS AND MODELS WHICH HAVE NOT REPORTED COUNTING ACCELEROMETER DATA DURING THE PREVIOUS 12 MONTHS. | A-1 |
| APPENDIX B - THE DETERMINATION OF SAMPLE STATISTICS FOR COUNTING ACCELEROMETER DATA. | B-1 |

RCS NADC 13920-2

INDEX OF CURRENTLY OPERATIONAL MODELS

| <u>Model</u> | <u>Previous 12 Months Data</u> | <u>All Data</u> |
|-----------------------------|--------------------------------|-----------------|
| A-4F (Blue Angels) (NOTE 1) | PAGE 14 | 15 |
| A-3B | 16 | 17 |
| KA-3B | 18 | 19 |
| A-4F | 20 | 21 |
| EA-4F | 22 | 23 |
| TA-4F | 24 | 25 |
| A-4G | 26 | 27 |
| TA-4G | 28 | 29 |
| TA-4J | 30 | 31 |
| A-4M | 32 | 33 |
| RA-5C | 34 | 35 |
| A-6A | 36 | 37 |
| EA-6A | 38 | 39 |
| NA-6A | 40 | 41 |
| A-6B | 42 | 43 |
| EA-6B | 44 | 45 |
| KA-6D | 46 | 47 |
| A-6E | 48 | 49 |
| A-7A | 50 | 51 |
| A-7B | 52 | 53 |
| A-7C | 54 | 55 |
| TA-7C | 56 | 57 |
| A-7E | 58 | 59 |
| A-7H | 60 | 61 |
| C-2A | 62 | 63 |
| F-4B | 64 | 65 |
| QF-4B | 66 | 67 |
| RF-4B | 68 | 69 |
| F-4J | 70 | 71 |
| F-4N | 72 | 73 |
| RF-8G | 74 | 75 |
| F-8J | 76 | 77 |
| DF-8J | 78 | 79 |
| DF-8L | 80 | 81 |
| P-3A | 82 | 83 |
| EP-3A | 84 | 85 |
| RP-3A | 86 | 87 |
| P-3B | 88 | 89 |
| EP-3B | 90 | 91 |
| P-3C | 92 | 93 |
| EP-3E | 94 | 95 |

NOTE 1: TRANSDUCER LOAD-LEVEL RANGE (5-, 6-, 7-, 8-g)

RCS NADC 13920-2

INDEX OF CURRENTLY OPERATIONAL MODELS

| <u>Model</u> | <u>Previous 12 Months Data</u> | <u>All Data</u> |
|--------------|--------------------------------|-----------------|
| ES-2D | PAGE 96 | 97 |
| S-3A | 98 | 99 |
| T-2B | 100 | 101 |
| T-2C | 102 | 103 |
| T-28B | 104 | 105 |
| T-28C | 106 | 107 |
| T-34B | 108 | 109 |
| AV-8A | 110 | 111 |

INDEX OF OUT-OF-SERVICE MODELS AND MODELS WHICH HAVE NOT REPORTED COUNTING
ACCELEROMETER DATA DURING THE PREVIOUS 12 MONTHS (APPENDIX A)

| <u>Model</u> | <u>All Data</u> |
|------------------------------|-----------------|
| F-4J (Blue Angels) (NOTE 1) | A-2 |
| F-11A (Blue Angels) (NOTE 2) | A-3 |
| F-11A (Blue Angels) (NOTE 1) | A-4 |
| A-1H | A-5 |
| A-1J | A-6 |
| EKA-3B | A-7 |
| A-4B | A-8 |
| TA-4B | A-9 |
| A-5A | A-10 |
| A-5B | A-11 |
| A-6C | A-12 |
| KC-130F | A-13 |
| AF-1E | A-14 |
| F-4A | A-15 |
| TF-4A | A-16 |
| F-6A | A-17 |
| F-8A | A-18 |
| RF-8A | A-19 |
| TF-8A | A-20 |
| F-8B | A-21 |
| F-8C | A-22 |
| F-8D | A-23 |
| F-8E | A-24 |
| DF-8F | A-25 |
| F-8H | A-26 |
| F-8K | A-27 |
| F-8L | A-28 |
| EF-10B | A-29 |
| F-11A | A-30 |
| WP-3A | A-31 |
| S-2D | A-32 |
| S-2E | A-33 |
| S-2G | A-34 |
| T-2A | A-35 |

NOTE 1: TRANSDUCER LOAD LEVEL RANGE (4-, 5-, 6-, 7-g)

2: TRANSDUCER LOAD LEVEL RANGE (6-, 7-, 8.5-, 10-g)

LIST OF SYMBOLS

| | |
|-------------------|--|
| MEAN OR \bar{X} | MEAN CUMULATIVE COUNTS PER 1000 HOURS |
| STD DEV OR S | STANDARD DEVIATION OF CUMULATIVE COUNTS PER 1000 HOURS |
| SKEWNESS OR A_3 | SKEWNESS OF LOAD RATE DISTRIBUTION |
| * | NO DATA IN THIS CATEGORY |
| ** | INSUFFICIENT DATA IN THIS CATEGORY |

RCS NADC 13920-2

THIS PAGE INTENTIONALLY LEFT BLANK

INTRODUCTION

The NAVAIRDEVVCEN (Naval Air Development Center) is engaged in various flight maneuver-loads programs as assigned by the Naval Air Systems Command. One of these is the counting accelerometer program, and under this program data have been collected and reported since 1955.

The primary purpose of this program is to provide the flight load history of individual Navy and Marine aircraft. Other purposes include, but are not limited to, the comparison of operational loads environment with structural design requirements, the comparison of load histories of one model with another, and the determination of expected loads environment of future models. More recently, however, these data are used as the major input in the NAVAIRDEVVCEN Aircraft Structural Appraisal of Fatigue Effects Program in estimating structural fatigue damage for those aircraft which do not have counting accelerometer data.

DISCUSSION

This is a semi-annual progress report. Included are statistical summaries of counting accelerometer data for all Navy and Marine aircraft. In-service models appear in the main text. Out-of-service models or models which have not reported counting accelerometer data during the previous 12 months appear in Appendix A. The summary for each out-of-service model is its final summary. New models are added as their counting accelerometer data becomes available.

For each model, the following statistics are presented: (See Appendix B for the statistical procedures.)

- \bar{x} - the estimated mean load exceedances (counts at 1000 flt. hrs.) for each g-level recorded on the counting accelerometer.
- S - estimated standard deviation (counts at 1000 flt. hrs.) of the load exceedances for each g-level.
- A_3 - estimated skewness factor for the load exceedance distribution.

Two statistical summaries describing cumulative g-count exceedances and flight hours for each currently operational model are presented:

1. The first summary includes all quality-control accepted data reported in the time period comprising the terminal date of this report and the 12 months preceding that date.
2. The second includes all quality-control accepted data reported in the counting accelerometer program from the day each airplane was delivered for service to the terminal date of this report.

The first summary, which includes only the most recent 12 months, shows an indication of a model's current severity of usage. The second summary describes the severity of loads experienced by all airplanes of each model since acceptance. A comparison of the first summary with the second shows whether current usage for any model is more or less severe than usage over its full lifetime.

A further breakdown by mission category is provided for each airplane model in both of the aforementioned summaries. These categories are defined as follows:

1. Navy Training - an airplane in a Navy squadron assigned to a non-combat zone. (This includes all Navy airplanes not classified as being in a combat zone.)

2. Navy Combat - an airplane in a Navy squadron assigned to a combat zone.
3. Marine Training - an airplane in a Marine squadron assigned to a non-combat zone. (This includes all Marine airplanes not classified as being in a combat zone.)
4. Marine Combat - an airplane in a Marine squadron assigned to a combat zone.

The statistics for the A-4F Blue Angels are separated into solo aircraft and diamond formation aircraft. In the subsequent tables, the total flight hours shown for a given model are the sum of the hours reported for each category. However, summing the number of airplanes reported in each category can result in a number exceeding the total aircraft, because the same airplane may have seen service in two or more categories. Its data were separated for calculation of statistics for each respective category.

Some general statistical observations for fleet-wide loads data are the following:

1. The load exceedance distribution for many of the aircraft models is non-normal (particularly asymmetrical) at all the g-levels recorded. In general, the degree of asymmetry increases with increasing g-level.
2. The scatter measure $\frac{S}{\bar{x}}$ (coefficient of variation) increases with higher g-levels.
3. For a given g-level, there is more scatter in loads received during training than during combat.
4. Differences exist in loads frequency among various configurations of the same model and various mission categories within the same configuration.

RCS NADC 13920-2

THIS PAGE INTENTIONALLY LEFT BLANK

T A B L E S

Counting accelerometer data are subject to quality control criteria modifications. Thus, in succeeding reports, model-wide summary statistics are subject to change even though a model may no longer be in service.

DATA FROM
7-76 THRU 6-77

MODEL A-4F BLUE ANGELS

7 AIRCRAFT 1460 HOURS

SOLO

| | | PRACTICE | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|----------|---------|--------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 7 AIRCRAFT | MEAN | 6206.69 | 1149.94 | 170.25 | 32.86 | |
| 335 HOURS | STD DEV | ** | ** | ** | ** | |
| | SKEWNESS | ** | ** | ** | ** | |

| | | SHOW | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|----------|---------|--------|--------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 4 AIRCRAFT | MEAN | 13236.72 | 3613.53 | 782.61 | 154.59 | |
| 104 HOURS | STD DEV | ** | ** | ** | ** | |
| | SKEWNESS | ** | ** | ** | ** | |

DIAMOND

| | | PRACTICE | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|----------|--------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 7 AIRCRAFT | MEAN | 1014.10 | 184.61 | 36.17 | 2.49 | |
| 802 HOURS | STD DEV | ** | ** | ** | ** | |
| | SKEWNESS | ** | ** | ** | ** | |

| | | SHOW | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|---------|--------|--------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 7 AIRCRAFT | MEAN | 1907.15 | 487.03 | 159.31 | 22.76 | |
| 220 HOURS | STD DEV | ** | ** | ** | ** | |
| | SKEWNESS | ** | ** | ** | ** | |

ALL DATA
1-62 THRU 6-77

MODEL A-4F BLUE ANGELS

8 AIRCRAFT 5100 HOURS

SOLO

| | | | | |
|----------|------|------|------|------|
| PRACTICE | 5.0G | 6.0G | 7.0G | 8.0G |
| ----- | ---- | ---- | ---- | ---- |

| | | | | | |
|------------|------|---------|---------|--------|-------|
| 8 AIRCRAFT | MEAN | 7857.00 | 2051.00 | 235.00 | 27.00 |
|------------|------|---------|---------|--------|-------|

| | | | | | |
|------------|---------|-----|-----|-----|-----|
| 1197 HOURS | STD DEV | .00 | .00 | .00 | .00 |
|------------|---------|-----|-----|-----|-----|

| | | | | |
|----------|-----|-----|-----|-----|
| SKEWNESS | .00 | .00 | .00 | .00 |
|----------|-----|-----|-----|-----|

| | | | | |
|------|------|------|------|------|
| SHOW | 5.0G | 6.0G | 7.0G | 8.0G |
| ---- | ---- | ---- | ---- | ---- |

| | | | | | |
|------------|------|----------|---------|--------|--------|
| 8 AIRCRAFT | MEAN | 12106.00 | 4852.00 | 960.00 | 123.00 |
|------------|------|----------|---------|--------|--------|

| | | | | | |
|-----------|---------|----|----|----|----|
| 375 HOURS | STD DEV | ** | ** | ** | ** |
|-----------|---------|----|----|----|----|

| | | | | |
|----------|----|----|----|----|
| SKEWNESS | ** | ** | ** | ** |
|----------|----|----|----|----|

DIAMOND

| | | | | |
|----------|------|------|------|------|
| PRACTICE | 5.0G | 6.0G | 7.0G | 8.0G |
| ----- | ---- | ---- | ---- | ---- |

| | | | | | |
|------------|------|---------|--------|-------|------|
| 8 AIRCRAFT | MEAN | 1129.00 | 256.00 | 50.00 | 7.00 |
|------------|------|---------|--------|-------|------|

| | | | | | |
|------------|---------|-----|-----|-----|-----|
| 2761 HOURS | STD DEV | .00 | .00 | .00 | .00 |
|------------|---------|-----|-----|-----|-----|

| | | | | |
|----------|-----|-----|-----|-----|
| SKEWNESS | .00 | .00 | .00 | .00 |
|----------|-----|-----|-----|-----|

| | | | | |
|------|------|------|------|------|
| SHOW | 5.0G | 6.0G | 7.0G | 8.0G |
| ---- | ---- | ---- | ---- | ---- |

| | | | | | |
|------------|------|---------|--------|--------|-------|
| 8 AIRCRAFT | MEAN | 1786.00 | 534.00 | 159.00 | 25.00 |
|------------|------|---------|--------|--------|-------|

| | | | | | |
|-----------|---------|----|----|----|----|
| 768 HOURS | STD DEV | ** | ** | ** | ** |
|-----------|---------|----|----|----|----|

| | | | | |
|----------|----|----|----|----|
| SKEWNESS | ** | ** | ** | ** |
|----------|----|----|----|----|

DATA FROM
7-76 THRU 6-77

MODEL A-3B

1 AIRCRAFT 136 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|---------|------|------|------|
| 1 AIRCRAFT | MEAN | 4373.16 | .00 | .00 | .00 |
| 136 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL A-3B

80 AIRCRAFT 65692 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|-------------|----------|--------|--------|-------|------|
| 80 AIRCRAFT | MEAN | 702.47 | 176.87 | 51.84 | 7.94 |
| 56897 HOURS | STD DEV | 403.68 | 111.56 | 36.55 | 9.63 |
| | SKEWNESS | 1.66 | 1.08 | 1.03 | 2.65 |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 25 AIRCRAFT | MEAN | 564.20 | 121.21 | 27.39 | 5.04 |
| 8795 HOURS | STD DEV | 249.09 | 75.35 | 25.68 | 6.67 |
| | SKEWNESS | 1.11 | .98 | 1.64 | 2.05 |

MARINE

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |

| | | | | | |
|------------|----------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL KA-3B

10 AIRCRAFT 3295 HOURS

NAVY

| | | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------|----------|----------|--------|------|------|------|
| 10 | AIRCRAFT | MEAN | 162.65 | 4.20 | 1.62 | .26 |
| 3295 | HOURS | STD DEV | 196.67 | 4.54 | 1.90 | .56 |
| | | SKEWNESS | 1.85 | 1.18 | 1.32 | 2.34 |

| | | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|---|----------|----------|------|------|------|------|
| 0 | AIRCRAFT | MEAN | * | * | * | * |
| 0 | HOURS | STD DEV | * | * | * | * |
| | | SKEWNESS | * | * | * | * |

MARINE

| | | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|---|----------|----------|------|------|------|------|
| 0 | AIRCRAFT | MEAN | * | * | * | * |
| 0 | HOURS | STD DEV | * | * | * | * |
| | | SKEWNESS | * | * | * | * |

| | | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|---|----------|----------|------|------|------|------|
| 0 | AIRCRAFT | MEAN | * | * | * | * |
| 0 | HOURS | STD DEV | * | * | * | * |
| | | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL KA-3B

50 AIRCRAFT 46709 HOURS

NAVY

| | | | | | |
|-------------|----------|--------|-------|------|------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| 49 AIRCRAFT | MEAN | 93.55 | 10.86 | 2.85 | .75 |
| 43681 HOURS | STD DEV | 138.36 | 16.55 | 5.28 | 2.30 |
| | SKEWNESS | 2.05 | 1.52 | 1.81 | 3.20 |

| | | | | | |
|-------------|----------|--------|-------|------|------|
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 11 AIRCRAFT | MEAN | 172.44 | 30.93 | 5.69 | .19 |
| 3028 HOURS | STD DEV | 47.42 | 17.09 | 5.41 | .59 |
| | SKEWNESS | .51 | 1.14 | .88 | 2.69 |

MARINE

| | | | | | |
|------------|----------|------|------|------|------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL A-4F

22 AIRCRAFT 5405 HOURS

NAVY

| | | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|----------|--------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 22 AIRCRAFT | MEAN | 697.55 | 111.39 | 9.75 | 3.20 | |
| 5248 HOURS | STD DEV | 378.47 | 88.45 | 24.05 | 15.32 | |
| | SKEWNESS | 1.58 | 2.31 | 3.16 | 4.14 | |
| | | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| | | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * | * |
| | SKEWNESS | * | * | * | * | * |

MARINE

| | | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|----------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 3 AIRCRAFT | MEAN | 94.08 | 94.08 | .00 | .00 | |
| 156 HOURS | STD DEV | ** | ** | ** | ** | |
| | SKEWNESS | ** | ** | ** | ** | |
| | | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| | | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * | * |
| | SKEWNESS | * | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL A-4F

59 AIRCRAFT 46309 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|--------|-------|-------|-------|
| 59 AIRCRAFT | MEAN | 641.16 | 98.55 | 11.04 | 2.34 |
| 36026 HOURS | STD DEV | 300.82 | 74.14 | 19.67 | 10.54 |
| | SKEWNESS | -.21 | 1.39 | 3.87 | 5.09 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|--------|--------|-------|------|
| 24 AIRCRAFT | MEAN | 506.76 | 151.38 | 22.00 | 2.28 |
| 6016 HOURS | STD DEV | 114.17 | 40.77 | 7.99 | 1.64 |
| | SKEWNESS | -.21 | .40 | .27 | 1.23 |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|--------|--------|-------|------|
| 9 AIRCRAFT | MEAN | 729.25 | 133.42 | 14.91 | 3.21 |
| 4267 HOURS | STD DEV | 257.10 | 63.21 | 8.55 | 2.01 |
| | SKEWNESS | -.63 | -.40 | .37 | 1.04 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL EA-4F

2 AIRCRAFT 538 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|--------|-------|------|------|
| 2 AIRCRAFT | MEAN | 192.35 | 35.33 | 4.42 | .00 |
| 538 HOURS | STD DEV | 77.54 | 15.05 | 1.88 | .00 |
| | SKEWNESS | -.27 | -.27 | -.27 | .00 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL EA-4F

3 AIRCRAFT 2182 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|--------|-------|------|------|
| 3 AIRCRAFT | MEAN | 185.37 | 25.44 | 3.32 | .00 |
| 2182 HOURS | STD DEV | 147.16 | 22.72 | 2.96 | .00 |
| | SKEWNESS | -.26 | -.27 | -.27 | .00 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL TA-4F

20 AIRCRAFT 4763 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|--------|-------|------|------|
| 17 AIRCRAFT | MEAN | 170.31 | 23.28 | 1.14 | .00 |
| 4361 HOURS | STD DEV | 99.77 | 38.02 | 2.42 | .00 |
| | SKEWNESS | 1.37 | 3.37 | 3.27 | .00 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|--------|------|------|------|
| 3 AIRCRAFT | MEAN | 179.68 | 8.07 | .00 | .00 |
| 402 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL TA-4F

163 AIRCRAFT 180872 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|--------------|----------|--------|-------|------|------|
| 141 AIRCRAFT | MEAN | 170.02 | 20.73 | 1.91 | .21 |
| 142474 HOURS | STD DEV | 183.13 | 34.46 | 3.90 | .84 |
| | SKEWNESS | 1.94 | 4.69 | 4.02 | 5.14 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|--------|-------|------|------|
| 8 AIRCRAFT | MEAN | 564.76 | 58.22 | 3.34 | .73 |
| 2158 HOURS | STD DEV | 149.00 | 21.08 | 2.38 | .52 |
| | SKEWNESS | -.38 | -.64 | .97 | .38 |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|--------|-------|-------|------|
| 37 AIRCRAFT | MEAN | 662.80 | 80.17 | 6.61 | .78 |
| 36240 HOURS | STD DEV | 420.89 | 96.62 | 11.56 | 2.16 |
| | SKEWNESS | 1.42 | 4.12 | 3.96 | 4.65 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL A-4G

6 AIRCRAFT 177 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|--------|-------|------|------|
| 6 AIRCRAFT | MEAN | 497.48 | 17.03 | 6.41 | .00 |
| 177 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL A-4G

16 AIRCRAFT 15502 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|---------|--------|-------|------|
| 16 AIRCRAFT | MEAN | 1978.65 | 316.40 | 36.62 | 5.30 |
| 15502 HOURS | STD DEV | 491.41 | 110.99 | 15.52 | 4.06 |
| | SKEWNESS | .10 | -.04 | .05 | .84 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL TA-4G

2 AIRCRAFT 80 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|--------|--------|-------|-------|
| 2 AIRCRAFT | MEAN | 159.87 | 111.00 | 48.87 | 24.43 |
| 80 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL TA-4G

4 AIRCRAFT 4674 HOURS

NAVY

| | | | | | |
|------------|----------|--------|-------|------|------|
| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
| 4 AIRCRAFT | MEAN | 780.06 | 90.24 | 7.31 | .95 |
| 4674 HOURS | STD DEV | 107.06 | 8.76 | 2.96 | 3.05 |
| | SKEWNESS | .02 | -.38 | 1.01 | 1.03 |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|------------|----------|------|------|------|------|
| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL TA-4J

297 AIRCRAFT 104039 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|--------------|----------|--------|-------|-------|------|
| 296 AIRCRAFT | MEAN | 263.81 | 31.67 | 4.57 | .73 |
| 104029 HOURS | STD DEV | 257.23 | 67.83 | 13.64 | 2.38 |
| | SKEWNESS | 7.20 | 12.46 | 13.01 | 8.07 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 1 AIRCRAFT | MEAN | .00 | .00 | .00 | .00 |
| 11 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL TA-4J

378 AIRCRAFT 599298 HOURS

NAVY

| | | | | | |
|--------------|----------|--------|-------|-------|------|
| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
| 373 AIRCRAFT | MEAN | 288.68 | 29.19 | 4.19 | .85 |
| 583038 HOURS | STD DEV | 241.00 | 53.97 | 14.03 | 4.48 |
| | SKEWNESS | 2.87 | 7.29 | 6.56 | 8.72 |
| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|-------------|----------|--------|-------|------|------|
| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
| 24 AIRCRAFT | MEAN | 176.31 | 11.00 | 1.31 | .86 |
| 16260 HOURS | STD DEV | 77.02 | 10.42 | 4.69 | 3.96 |
| | SKEWNESS | .57 | 1.29 | 4.16 | 4.28 |
| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL A-4M

77 AIRCRAFT 16171 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|--------|-------|-------|------|
| 4 AIRCRAFT | MEAN | 627.33 | 60.80 | 10.75 | 2.76 |
| 628 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|--------|-------|-------|------|
| 73 AIRCRAFT | MEAN | 576.19 | 67.08 | 12.88 | 2.36 |
| 15543 HOURS | STD DEV | 214.10 | 54.15 | 16.54 | 4.66 |
| | SKEWNESS | 2.29 | 6.03 | 5.78 | 3.59 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL A-4M

100 AIRCRAFT 39091 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|---------|--------|-------|------|
| 15 AIRCRAFT | MEAN | 1569.47 | 283.05 | 48.36 | 7.74 |
| 2660 HOURS | STD DEV | 628.92 | 255.90 | 54.56 | 2.56 |
| | SKEWNESS | 2.05 | 2.41 | 2.42 | -.09 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|--------|--------|-------|------|
| 95 AIRCRAFT | MEAN | 599.59 | 91.03 | 18.21 | 5.17 |
| 36431 HOURS | STD DEV | 341.90 | 101.03 | 26.12 | 8.92 |
| | SKEWNESS | 1.52 | 3.62 | 3.22 | 3.17 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL RA-5C

27 AIRCRAFT 7672 HOURS

NAVY

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|-------------|----------|--------|------|------|------|
| 27 AIRCRAFT | MEAN | 107.20 | 6.74 | .44 | .00 |
| 7672 HOURS | STD DEV | 41.12 | 7.04 | .78 | .00 |
| | SKEWNESS | 1.14 | 2.73 | 3.42 | .00 |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL RA-5C

129 AIRCRAFT 151383 HOURS

NAVY

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|--------------|----------|--------|-------|------|------|
| 129 AIRCRAFT | MEAN | 203.11 | 12.74 | .99 | .18 |
| 130518 HOURS | STD DEV | 113.94 | 25.93 | 1.98 | .67 |
| | SKEWNESS | 2.40 | 8.42 | 2.70 | 3.43 |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|-------------|----------|--------|-------|-------|------|
| 94 AIRCRAFT | MEAN | 931.07 | 99.95 | 13.46 | .66 |
| 20865 HOURS | STD DEV | 435.85 | 70.01 | 18.99 | 1.29 |
| | SKEWNESS | 3.15 | 3.41 | 6.42 | 3.66 |

MARINE

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL A-6A

29 AIRCRAFT 5085 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|--------|-------|------|
| 17 AIRCRAFT | MEAN | 1089.80 | 348.72 | 55.89 | 1.43 |
| 2403 HOURS | STD DEV | 170.96 | 74.22 | 19.15 | 1.49 |
| | SKEWNESS | 1.24 | .87 | 1.32 | 1.83 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|--------|-------|------|
| 13 AIRCRAFT | MEAN | 1373.20 | 504.32 | 96.82 | 9.91 |
| 2682 HOURS | STD DEV | 331.73 | 169.22 | 32.08 | 5.80 |
| | SKEWNESS | .89 | 1.05 | .73 | 1.61 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL A-6A

416 AIRCRAFT 397033 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|--------|-------|------|
| 385 AIRCRAFT | MEAN | 1277.38 | 410.70 | 67.23 | 6.16 |
| 232193 HOURS | STD DEV | 455.67 | 216.43 | 55.68 | 8.75 |
| | SKEWNESS | .77 | 1.71 | 3.40 | 6.71 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|--------|--------|-------|
| 197 AIRCRAFT | MEAN | 1081.91 | 451.75 | 110.41 | 13.06 |
| 38369 HOURS | STD DEV | 267.48 | 153.44 | 56.44 | 7.62 |
| | SKEWNESS | 4.34 | 4.62 | 3.33 | 2.05 |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|--------|--------|-------|------|
| 195 AIRCRAFT | MEAN | 916.31 | 227.51 | 31.52 | 2.88 |
| 100031 HOURS | STD DEV | 349.90 | 133.10 | 28.01 | 4.42 |
| | SKEWNESS | .51 | 1.14 | 2.16 | 2.94 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|--------|-------|------|
| 77 AIRCRAFT | MEAN | 457.85 | 149.86 | 23.43 | 1.37 |
| 26440 HOURS | STD DEV | 211.51 | 110.44 | 21.43 | 3.45 |
| | SKEWNESS | 1.11 | 2.92 | 3.29 | 7.09 |

DATA FROM
7-76 THRU 6-77

MODEL EA-6A

14 AIRCRAFT 4194 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|-------|------|------|------|
| 14 AIRCRAFT | MEAN | 13.58 | .24 | .07 | .00 |
| 4194 HOURS | STD DEV | 17.41 | 1.12 | .50 | .00 |
| | SKEWNESS | 1.15 | 2.63 | 3.30 | .00 |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL EA-6A

22 AIRCRAFT 25788 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|-------|------|------|------|
| 22 AIRCRAFT | MEAN | 57.63 | 4.64 | .36 | .00 |
| 25350 HOURS | STD DEV | 41.54 | 5.04 | .64 | .20 |
| | SKEWNESS | .50 | 1.45 | .94 | 4.37 |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 5 AIRCRAFT | MEAN | 10.56 | 1.51 | .00 | .00 |
| 438 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

DATA FROM
7-76 THRU 6-77

MODEL NA-6A

6 AIRCRAFT 244 HOURS

NAVY

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 6 AIRCRAFT | MEAN | 26.30 | .00 | .00 | .00 |
| 244 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL NA-6A

8 AIRCRAFT 4662 HOURS

NAVY

| | | | | | |
|------------|----------|--------|-------|-------|-------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 8 AIRCRAFT | MEAN | 100.83 | 18.47 | 3.52 | 1.07 |
| 4662 HOURS | STD DEV | 106.74 | 30.44 | 6.51 | 1.41 |
| | SKEWNESS | .89 | 1.12 | 1.06 | 1.07 |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL A-6B

3 AIRCRAFT 324 HOURS

NAVY

| | | | | | |
|------------|----------|--------|--------|-------|------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| 3 AIRCRAFT | MEAN | 412.46 | 109.53 | 12.02 | .00 |
| 324 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|------------|----------|------|------|------|------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL A-6B

18 AIRCRAFT 11964 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|--------|-------|------|
| 18 AIRCRAFT | MEAN | 523.51 | 127.72 | 17.36 | 2.84 |
| 10043 HOURS | STD DEV | 155.98 | 53.34 | 14.34 | 4.97 |
| | SKEWNESS | -.98 | -.27 | .96 | 2.28 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|-------|------|------|
| 10 AIRCRAFT | MEAN | 301.71 | 91.54 | 9.41 | 1.92 |
| 1921 HOURS | STD DEV | 101.45 | 55.09 | 7.42 | 2.85 |
| | SKEWNESS | .63 | 1.27 | 1.77 | 2.18 |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL EA-6B

48 AIRCRAFT 13514 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|-------|------|------|
| 48 AIRCRAFT | MEAN | 122.15 | 17.39 | 1.34 | .07 |
| 13514 HOURS | STD DEV | 44.96 | 12.93 | 2.02 | .27 |
| | SKEWNESS | .01 | 2.93 | 3.29 | 6.46 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL EA-6B

56 AIRCRAFT 53313 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|-------|------|------|
| 56 AIRCRAFT | MEAN | 100.96 | 13.76 | 1.25 | .17 |
| 53306 HOURS | STD DEV | 50.54 | 16.37 | 3.69 | .57 |
| | SKEWNESS | 1.51 | 2.59 | 4.21 | 3.46 |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 1 AIRCRAFT | MEAN | 140.85 | .00 | .00 | .00 |
| 7 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL KA-6D

53 AIRCRAFT 11244 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|-------|------|------|------|
| 53 AIRCRAFT | MEAN | 36.39 | 4.64 | 2.97 | .58 |
| 11244 HOURS | STD DEV | 74.72 | 7.61 | 7.19 | 1.20 |
| | SKEWNESS | 6.26 | 5.81 | 6.44 | 5.98 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL KA-6D

70 AIRCRAFT 77174 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|-------|------|------|------|
| 70 AIRCRAFT | MEAN | 34.52 | 3.48 | .84 | .09 |
| 68501 HOURS | STD DEV | 78.81 | 6.04 | 3.04 | .57 |
| | SKEWNESS | 5.81 | 3.83 | 6.29 | 5.47 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|-------|------|------|------|
| 33 AIRCRAFT | MEAN | 21.77 | 3.62 | .87 | .00 |
| 8673 HOURS | STD DEV | 16.23 | 4.15 | 1.69 | .00 |
| | SKEWNESS | 1.12 | 2.44 | 3.54 | .00 |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL A-6E

211 AIRCRAFT 47272 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|--------|-------|------|
| 157 AIRCRAFT | MEAN | 1010.10 | 240.21 | 24.95 | 2.77 |
| 33648 HOURS | STD DEV | 309.86 | 111.62 | 20.42 | 3.81 |
| | SKEWNESS | .79 | 2.41 | 4.21 | 4.29 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|--------|-------|------|
| 60 AIRCRAFT | MEAN | 602.53 | 112.41 | 14.94 | 3.80 |
| 13624 HOURS | STD DEV | 146.20 | 45.25 | 10.39 | 4.45 |
| | SKEWNESS | 1.26 | 2.50 | 1.87 | 3.80 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL A-6E

251 AIRCRAFT 145365 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|--------|-------|------|
| 210 AIRCRAFT | MEAN | 1111.48 | 279.94 | 31.98 | 3.54 |
| 111537 HOURS | STD DEV | 413.79 | 138.53 | 26.04 | 4.28 |
| | SKEWNESS | .80 | 1.26 | 1.75 | 2.31 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|--------|-------|------|
| 66 AIRCRAFT | MEAN | 552.99 | 117.46 | 14.79 | 2.20 |
| 33829 HOURS | STD DEV | 147.69 | 56.95 | 16.01 | 3.53 |
| | SKEWNESS | .16 | .92 | 2.76 | 3.05 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL A-7A

55 AIRCRAFT 14579 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|--------|--------|-------|------|
| 55 AIRCRAFT | MEAN | 881.16 | 276.36 | 30.73 | 1.92 |
| 14579 HOURS | STD DEV | 311.05 | 185.26 | 56.67 | 4.92 |
| | SKEWNESS | 1.26 | 2.93 | 6.02 | 6.12 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL A-7A

194 AIRCRAFT 309681 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|--------------|----------|---------|--------|-------|------|
| 194 AIRCRAFT | MEAN | 1045.13 | 233.76 | 27.74 | 2.61 |
| 245006 HOURS | STD DEV | 446.67 | 152.05 | 35.77 | 4.50 |
| | SKEWNESS | .25 | 1.71 | 5.23 | 4.05 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|--------------|----------|--------|--------|-------|------|
| 133 AIRCRAFT | MEAN | 765.97 | 242.17 | 32.86 | 2.62 |
| 64675 HOURS | STD DEV | 157.84 | 77.57 | 15.90 | 2.44 |
| | SKEWNESS | .21 | 1.61 | .86 | 1.77 |

MARINF

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL A-7B

37 AIRCRAFT 7932 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|--------|--------|-------|-------|
| 37 AIRCRAFT | MEAN | 837.83 | 176.32 | 13.42 | 2.65 |
| 7932 HOURS | STD DEV | 234.56 | 82.52 | 14.94 | 10.10 |
| | SKEWNESS | 1.20 | 2.13 | 2.93 | 4.81 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL A-7B

111 AIRCRAFT 96607 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|--------------|----------|---------|--------|-------|-------|
| 110 AIRCRAFT | MEAN | 1049.77 | 290.34 | 35.61 | 6.18 |
| 87449 HOURS | STD DEV | 376.43 | 160.03 | 41.20 | 13.37 |
| | SKEWNESS | .78 | .57 | 2.54 | 4.91 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|---------|--------|-------|------|
| 28 AIRCRAFT | MEAN | 1319.99 | 433.55 | 57.57 | 4.08 |
| 9158 HOURS | STD DEV | 351.35 | 117.24 | 33.17 | 4.58 |
| | SKEWNESS | .01 | .85 | 3.00 | 3.58 |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77MODEL A-7C

18 AIRCRAFT 3854 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|---------|--------|--------|------|
| 18 AIRCRAFT | MEAN | 1178.04 | 375.11 | 93.78 | 3.04 |
| 3854 HOURS | STD DEV | 744.68 | 340.32 | 112.67 | 3.90 |
| | SKEWNESS | 1.43 | 2.46 | 2.99 | 3.05 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL A-7C

45 AIRCRAFT 42228 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|---------|--------|-------|------|
| 44 AIRCRAFT | MEAN | 1123.40 | 224.21 | 26.49 | 3.70 |
| 34641 HOURS | STD DEV | 637.09 | 186.04 | 43.99 | 6.80 |
| | SKEWNESS | .45 | 1.69 | 3.45 | 3.76 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|--------|--------|-------|-------|
| 22 AIRCRAFT | MEAN | 660.69 | 151.23 | 17.98 | 2.11 |
| 7587 HOURS | STD DEV | 175.62 | 43.50 | 18.49 | 12.62 |
| | SKEWNESS | 1.49 | .70 | 3.53 | 4.31 |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL TA-7C

6 AIRCRAFT 340 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|--------|--------|------|------|
| 6 AIRCRAFT | MEAN | 714.31 | 247.60 | .10 | .05 |
| 340 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL TA-7C

18 AIRCRAFT 542 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|--------|--------|------|------|
| 18 AIRCRAFT | MEAN | 732.68 | 233.89 | 3.29 | .04 |
| 542 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |
| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL A-7E

295 AIRCRAFT 88394 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|--------------|----------|--------|--------|-------|------|
| 295 AIRCRAFT | MEAN | 758.12 | 118.53 | 8.92 | .80 |
| 88394 HOURS | STD DEV | 370.41 | 119.55 | 29.67 | 2.34 |
| | SKEWNESS | 3.81 | 10.53 | 13.81 | 6.62 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL A-7E

355 AIRCRAFT 316303 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|--------------|----------|--------|--------|-------|------|
| 355 AIRCRAFT | MEAN | 669.89 | 100.15 | 7.24 | 1.00 |
| 308135 HOURS | STD DEV | 352.71 | 94.65 | 25.13 | 3.99 |
| | SKEWNESS | 1.83 | 5.23 | 11.43 | 6.31 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|--------|-------|------|------|
| 37 AIRCRAFT | MEAN | 315.03 | 61.92 | 4.84 | .68 |
| 8168 HOURS | STD DEV | 60.51 | 19.82 | 2.91 | 1.06 |
| | SKEWNESS | .04 | .26 | 1.67 | 4.35 |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77MODEL A-7H

20 AIRCRAFT 235 HOURS

NAVY

| | | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|----------|--------|------|------|------|
| 20 AIRCRAFT | MEAN | 519.20 | 255.65 | 8.59 | .00 | |
| 235 HOURS | STD DEV | ** | ** | ** | ** | |
| | SKEWNESS | ** | ** | ** | ** | |
| | | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * | |
| 0 HOURS | STD DEV | * | * | * | * | |
| | SKEWNESS | * | * | * | * | |

MARINE

| | | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * | |
| 0 HOURS | STD DEV | * | * | * | * | |
| | SKEWNESS | * | * | * | * | |
| | | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * | |
| 0 HOURS | STD DEV | * | * | * | * | |
| | SKEWNESS | * | * | * | * | |

ALL DATA
1-62 THRU 6-77

MODEL A-7H

41 AIRCRAFT 460 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|-------------|----------|--------|--------|-------|-------|
| 41 AIRCRAFT | MEAN | 438.02 | 183.86 | 16.92 | 3.87 |
| 460 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |
| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|-------|-------|-------|-------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL C-2A

4 AIRCRAFT 1693 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|-------|------|------|------|
| 4 AIRCRAFT | MEAN | 23.29 | 1.08 | .00 | .00 |
| 1693 HOURS | STD DEV | 13.95 | .92 | .00 | .00 |
| | SKEWNESS | -.01 | .31 | .00 | .00 |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL C-2A

17 AIRCRAFT 50701 HOURS

NAVY

| | | | | | |
|-------------|----------|-------|-------|-------|------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| 17 AIRCRAFT | MEAN | 47.46 | 14.18 | 5.95 | 1.51 |
| 50701 HOURS | STD DEV | 61.26 | 25.96 | 12.46 | 3.64 |
| | SKEWNESS | 2.05 | 2.33 | 2.20 | 1.96 |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | | | | | |
|------------|----------|------|------|------|------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL F-4B

19 AIRCRAFT 1636 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|--------|--------|-------|
| 19 AIRCRAFT | MEAN | 2756.97 | 796.02 | 261.56 | 76.62 |
| 1636 HOURS | STD DEV | 967.43 | 287.11 | 117.95 | 43.80 |
| | SKEWNESS | .74 | .44 | 1.22 | 2.35 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL F-4B

611 AIRCRAFT 870959 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|--------|--------|-------|
| 573 AIRCRAFT | MEAN | 1916.56 | 665.81 | 190.76 | 46.48 |
| 452032 HOURS | STD DEV | 1115.16 | 506.91 | 210.99 | 75.08 |
| | SKEWNESS | 1.86 | 2.15 | 3.29 | 5.40 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|--------|--------|-------|
| 291 AIRCRAFT | MEAN | 1137.73 | 405.31 | 129.20 | 31.32 |
| 108405 HOURS | STD DEV | 372.90 | 132.70 | 67.31 | 31.02 |
| | SKEWNESS | 2.98 | 1.94 | 4.10 | 8.73 |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|--------|--------|-------|
| 336 AIRCRAFT | MEAN | 2308.28 | 749.06 | 184.98 | 40.80 |
| 203787 HOURS | STD DEV | 1197.25 | 522.21 | 193.15 | 60.69 |
| | SKEWNESS | 1.25 | 1.61 | 2.08 | 3.35 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|--------|--------|-------|
| 226 AIRCRAFT | MEAN | 2221.18 | 864.39 | 225.90 | 47.53 |
| 106735 HOURS | STD DEV | 695.10 | 341.03 | 155.65 | 51.23 |
| | SKEWNESS | 1.47 | 1.22 | 2.23 | 4.40 |

DATA FROM
7-76 THRU 6-77

MODEL QF-4B

4 AIRCRAFT 146 HOURS

NAVY

| | | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--|--|----------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |

| | | | | | |
|------------|------|--------|--------|-------|-----|
| 4 AIRCRAFT | MEAN | 661.59 | 133.30 | 25.19 | .00 |
|------------|------|--------|--------|-------|-----|

| | | | | | |
|-----------|---------|----|----|----|----|
| 146 HOURS | STD DEV | ** | ** | ** | ** |
|-----------|---------|----|----|----|----|

| | | | | | |
|--|----------|----|----|----|----|
| | SKEWNESS | ** | ** | ** | ** |
|--|----------|----|----|----|----|

| | | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|--|--|--------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

MARINE

| | | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--|--|----------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

| | | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|--|--|--------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

ALL DATA
1-62 THRU 6-77

MODEL QF-4B

9 AIRCRAFT 477 HOURS

NAVY

| | | | | | |
|------------|----------|--------|--------|-------|-------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 9 AIRCRAFT | MEAN | 915.02 | 225.68 | 43.35 | 5.41 |
| 477 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL RF-4B

18 AIRCRAFT 2601 HOURS

NAVY

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|-------------|----------|--------|--------|-------|-------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 18 AIRCRAFT | MEAN | 604.37 | 183.44 | 47.36 | 14.08 |
| 2601 HOURS | STD DEV | 187.50 | 97.54 | 49.49 | 19.56 |
| | SKEWNESS | 1.30 | 2.63 | 3.46 | 3.57 |

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL RF-4B

46 AIRCRAFT 68251 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|--------|-------|-------|
| 46 AIRCRAFT | MFAN | 359.89 | 90.59 | 21.64 | 5.64 |
| 60236 HOURS | STD DEV | 269.77 | 93.23 | 32.12 | 12.90 |
| | SKEWNESS | .55 | 1.79 | 2.39 | 3.45 |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 16 AIRCRAFT | MEAN | 1087.24 | 210.75 | 41.81 | 8.94 |
| 8015 HOURS | STD DEV | 405.94 | 78.46 | 26.06 | 5.37 |
| | SKEWNESS | 1.58 | 1.80 | 2.18 | 1.10 |

DATA FROM
7-76 THRU 6-77

MODEL F-4J

279 AIRCRAFT 45549 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|---------|--------|-------|
| 169 AIRCRAFT | MEAN | 3140.03 | 1236.57 | 373.63 | 75.22 |
| 28903 HOURS | STD DEV | 971.25 | 480.84 | 205.10 | 50.02 |
| | SKEWNESS | 1.12 | 1.32 | 2.58 | 2.33 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|---------|--------|-------|
| 113 AIRCRAFT | MEAN | 3710.97 | 1258.43 | 331.13 | 94.99 |
| 16645 HOURS | STD DEV | 761.00 | 292.64 | 111.77 | 58.60 |
| | SKEWNESS | .00 | .25 | 1.37 | 2.84 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL F-4J

470 AIRCRAFT 592908 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|---------|--------|-------|
| 439 AIRCRAFT | MEAN | 2995.64 | 1135.00 | 342.95 | 79.85 |
| 359836 HOURS | STD DEV | 1680.12 | 796.67 | 319.45 | 99.83 |
| | SKEWNESS | .73 | .91 | 1.60 | 2.45 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|--------|--------|-------|
| 177 AIRCRAFT | MEAN | 1118.00 | 458.21 | 137.81 | 34.71 |
| 53694 HOURS | STD DEV | 341.12 | 157.31 | 64.39 | 36.91 |
| | SKEWNESS | 1.82 | 2.85 | 2.67 | 4.36 |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|---------|--------|--------|
| 236 AIRCRAFT | MEAN | 4549.17 | 1703.86 | 525.84 | 147.06 |
| 169567 HOURS | STD DEV | 1583.52 | 639.70 | 289.83 | 116.65 |
| | SKEWNESS | .86 | .95 | 1.18 | 1.92 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|---------|--------|-------|
| 49 AIRCRAFT | MEAN | 2810.13 | 1314.14 | 413.55 | 76.73 |
| 9810 HOURS | STD DEV | 623.07 | 264.93 | 170.83 | 47.63 |
| | SKEWNESS | 2.54 | 2.24 | 1.87 | 1.60 |

DATA FROM
7-76 THRU 6-77

MODEL F-4N

128 AIRCRAFT 19935 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|---------|--------|-------|
| 93 AIRCRAFT | MEAN | 2514.87 | 1020.97 | 261.82 | 36.54 |
| 14884 HOURS | STD DEV | 870.24 | 422.56 | 128.23 | 19.47 |
| | SKEWNESS | 1.72 | 1.65 | 2.27 | 1.87 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|---------|--------|-------|
| 36 AIRCRAFT | MEAN | 4927.70 | 1553.21 | 301.22 | 39.49 |
| 5051 HOURS | STD DEV | 452.48 | 197.93 | 103.18 | 16.20 |
| | SKEWNESS | 1.88 | 3.13 | 4.40 | 3.10 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL F-4N

166 AIRCRAFT 61499 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|---------|--------|-------|
| 124 AIRCRAFT | MEAN | 2811.37 | 1244.97 | 390.65 | 77.33 |
| 43409 HOURS | STD DEV | 1114.01 | 515.60 | 171.68 | 44.29 |
| | SKEWNESS | 2.31 | 1.79 | 1.30 | 1.90 |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 7 AIRCRAFT | MEAN | 1282.91 | 537.08 | 162.76 | 35.94 |
| 189 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|---------|--------|-------|
| 50 AIRCRAFT | MEAN | 4158.15 | 1533.59 | 415.91 | 76.07 |
| 17902 HOURS | STD DEV | 981.89 | 523.19 | 236.82 | 57.32 |
| | SKEWNESS | 1.10 | 1.62 | 1.75 | 1.81 |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL RF-RG

20 AIRCRAFT 4265 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|-------|------|------|
| 20 AIRCRAFT | MEAN | 180.61 | 34.92 | 6.79 | 1.08 |
| 4265 HOURS | STD DEV | 125.03 | 26.53 | 6.75 | 1.62 |
| | SKEWNESS | 1.81 | 1.72 | 1.75 | 1.97 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL RF-8G

43 AIRCRAFT 39527 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|--------|-------|------|
| 43 AIRCRAFT | MEAN | 375.61 | 106.69 | 24.71 | 3.52 |
| 38335 HOURS | STD DEV | 273.77 | 91.95 | 24.53 | 6.79 |
| | SKEWNESS | .56 | 1.00 | 1.36 | 4.81 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|--------|-------|------|
| 11 AIRCRAFT | MEAN | 1481.32 | 391.60 | 63.37 | 8.37 |
| 1192 HOURS | STD DEV | 387.16 | 90.25 | 26.29 | 5.98 |
| | SKEWNESS | 1.13 | 1.89 | 1.75 | 1.30 |

MARINF

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL F-8J

5 AIRCRAFT 75 HOURS

NAVY

| | | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--|--|----------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |

| | | | | | |
|------------|------|--------|--------|-----|-----|
| 5 AIRCRAFT | MEAN | 336.77 | 103.81 | .00 | .00 |
|------------|------|--------|--------|-----|-----|

| | | | | | |
|----------|---------|----|----|----|----|
| 75 HOURS | STD DEV | ** | ** | ** | ** |
|----------|---------|----|----|----|----|

| | | | | | |
|--|----------|----|----|----|----|
| | SKEWNESS | ** | ** | ** | ** |
|--|----------|----|----|----|----|

| | | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|--|--|--------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

MARINE

| | | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--|--|----------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

| | | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|--|--|--------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

ALL DATA
1-62 THRU 6-77

MODEL F-8J

134 AIRCRAFT 128061 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|---------|--------|--------|-------|
| 134 AIRCRAFT | MEAN | 2136.56 | 647.44 | 121.77 | 15.13 |
| 100967 HOURS | STD DEV | 726.40 | 267.53 | 63.60 | 18.24 |
| | SKEWNESS | .89 | .70 | 1.18 | 6.90 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|--------|-------|------|
| 93 AIRCRAFT | MEAN | 769.47 | 258.14 | 55.15 | 8.35 |
| 27094 HOURS | STD DEV | 318.22 | 138.06 | 35.52 | 9.12 |
| | SKEWNESS | 2.48 | 2.94 | 2.90 | 3.75 |

MARINF

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL DF-8J

1 AIRCRAFT 36 HOURS

NAVY

| | | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|----------|--------|-------|------|------|
| 1 AIRCRAFT | MEAN | 909.09 | 192.84 | 27.55 | .00 | |
| 36 HOURS | STD DEV | ** | ** | ** | ** | |
| | SKEWNESS | ** | ** | ** | ** | |
| | | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * | |
| 0 HOURS | STD DEV | * | * | * | * | |
| | SKEWNESS | * | * | * | * | |

MARINE

| | | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * | |
| 0 HOURS | STD DEV | * | * | * | * | |
| | SKEWNESS | * | * | * | * | |
| | | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * | |
| 0 HOURS | STD DEV | * | * | * | * | |
| | SKEWNESS | * | * | * | * | |

ALL DATA
1-62 THRU 6-77

MODEL DF-8J

1 AIRCRAFT 36 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|--------|--------|-------|------|
| 1 AIRCRAFT | MEAN | 909.09 | 192.84 | 27.55 | .00 |
| 36 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL DF-RL

4 AIRCRAFT 167 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--|----------|------|------|------|------|
|--|----------|------|------|------|------|

| | | | | | |
|------------|------|---------|--------|-------|-----|
| 4 AIRCRAFT | MEAN | 1131.01 | 376.49 | 84.27 | .00 |
|------------|------|---------|--------|-------|-----|

| | | | | | |
|-----------|---------|----|----|----|----|
| 167 HOURS | STD DEV | ** | ** | ** | ** |
|-----------|---------|----|----|----|----|

| | | | | | |
|--|----------|----|----|----|----|
| | SKEWNESS | ** | ** | ** | ** |
|--|----------|----|----|----|----|

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|--|--------|------|------|------|------|
|--|--------|------|------|------|------|

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--|----------|------|------|------|------|
|--|----------|------|------|------|------|

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|--|--------|------|------|------|------|
|--|--------|------|------|------|------|

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

ALL DATA
1-62 THRU 6-77

MODEL DF-8L

5 AIRCRAFT 2081 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|--------|--------|-------|------|
| 5 AIRCRAFT | MEAN | 657.85 | 168.35 | 25.46 | 2.33 |
| 2081 HOURS | STD DEV | 217.60 | 54.39 | 8.30 | 2.57 |
| | SKEWNESS | -.29 | -.40 | -.08 | .77 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL P-3A

107 AIRCRAFT 48602 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|--------------|----------|--------|------|-------|------|
| 107 AIRCRAFT | MEAN | 22.51 | .18 | .04 | .00 |
| 48602 HOURS | STD DEV | 113.48 | .78 | .43 | .00 |
| | SKEWNESS | 9.83 | 5.94 | 10.14 | .00 |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL P-3A

151 AIRCRAFT 948604 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|--------------|----------|-------|------|------|------|
| 151 AIRCRAFT | MEAN | 17.56 | 1.41 | .18 | .02 |
| 857277 HOURS | STD DEV | 83.12 | 4.39 | 1.41 | .26 |
| | SKEWNESS | 8.66 | 6.02 | 9.32 | 6.53 |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|--------------|----------|-------|------|------|------|
| 100 AIRCRAFT | MEAN | 12.22 | 1.09 | .08 | .01 |
| 91328 HOURS | STD DEV | 14.99 | 2.36 | .41 | .10 |
| | SKEWNESS | 2.82 | 2.43 | 3.98 | 9.80 |

MARINF

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL EP-3A

2 AIRCRAFT 445 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 2 AIRCRAFT | MEAN | .00 | .00 | .00 | .00 |
| 445 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL EP-3A

2 AIRCRAFT 1286 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 2 AIRCRAFT | MEAN | .93 | .93 | .93 | .00 |
| 1286 HOURS | STD DEV | .38 | .38 | .38 | .00 |
| | SKEWNESS | -.42 | -.42 | -.42 | .00 |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL RP-3A

3 AIRCRAFT 2866 HOURS

NAVY

| | | | | | |
|------------|----------|------|------|------|------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| 3 AIRCRAFT | MEAN | 3.33 | .00 | .00 | .00 |
| 2866 HOURS | STD DEV | 5.41 | .00 | .00 | .00 |
| | SKEWNESS | .17 | .00 | .00 | .00 |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|------------|----------|------|------|------|------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL RP-3A

3 AIRCRAFT 7657 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 3 AIRCRAFT | MEAN | 4.06 | .32 | .16 | .00 |
| 7657 HOURS | STD DEV | 4.53 | .61 | .31 | .00 |
| | SKEWNESS | -.07 | .04 | .04 | .00 |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL P-3B

114 AIRCRAFT 80123 HOURS

NAVY

| | | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|-------|----------|----------|------|------|------|------|
| 114 | AIRCRAFT | MEAN | 4.04 | .43 | .08 | .02 |
| 80123 | HOURS | STD DEV | 5.46 | .94 | .33 | .16 |
| | | SKEWNESS | 3.57 | 3.44 | 4.82 | 7.26 |

| | | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|---|----------|----------|------|------|------|------|
| 0 | AIRCRAFT | MEAN | * | * | * | * |
| 0 | HOURS | STD DEV | * | * | * | * |
| | | SKEWNESS | * | * | * | * |

MARINE

| | | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|---|----------|----------|------|------|------|------|
| 0 | AIRCRAFT | MEAN | * | * | * | * |
| 0 | HOURS | STD DEV | * | * | * | * |
| | | SKEWNESS | * | * | * | * |

| | | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|---|----------|----------|------|------|------|------|
| 0 | AIRCRAFT | MEAN | * | * | * | * |
| 0 | HOURS | STD DEV | * | * | * | * |
| | | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL P-3B

127 AIRCRAFT 839749 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|--------------|----------|-------|------|------|------|
| 127 AIRCRAFT | MEAN | 8.48 | .76 | .10 | .03 |
| 752618 HOURS | STD DEV | 22.07 | 1.98 | .41 | .26 |
| | SKEWNESS | 2.05 | 1.79 | 1.75 | 4.36 |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 78 AIRCRAFT | MEAN | 4.90 | .44 | .03 | .01 |
| 87131 HOURS | STD DEV | 5.51 | .82 | .15 | .11 |
| | SKEWNESS | .66 | 2.77 | 5.63 | 8.38 |

MARINE

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL EP-3B

2 AIRCRAFT 2111 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 2 AIRCRAFT | MEAN | .00 | .00 | .00 | .00 |
| 2111 HOURS | STD DEV | .00 | .00 | .00 | .00 |
| | SKEWNESS | .00 | .00 | .00 | .00 |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL EP-3B

2 AIRCRAFT 21353 HOURS

NAVY

| | | | | | |
|-------------|----------|-------|-------|-------|-------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ----- | ----- | ----- | ----- |
| 2 AIRCRAFT | MEAN | 2.02 | .00 | .00 | .00 |
| 12575 HOURS | STD DEV | 2.20 | .00 | .00 | .00 |
| | SKEWNESS | -.05 | .00 | .00 | .00 |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ----- | ----- | ----- | ----- |
| 2 AIRCRAFT | MEAN | 4.75 | .54 | .00 | .00 |
| 8778 HOURS | STD DEV | 6.34 | .97 | .00 | .00 |
| | SKEWNESS | -.26 | -.26 | .00 | .00 |

MARINE

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL P-3C

126 AIRCRAFT 73060 HOURS

NAVY

| | | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|--------------|----------|----------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 126 AIRCRAFT | MEAN | | 3.68 | .87 | .52 | .23 |
| 73060 HOURS | STD DEV | | 4.48 | 2.71 | 2.30 | .97 |
| | SKEWNESS | | 2.48 | 5.30 | 7.57 | 5.71 |

| | | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|--------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | | * | * | * | * |
| 0 HOURS | STD DEV | | * | * | * | * |
| | SKEWNESS | | * | * | * | * |

MARINE

| | | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|----------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | | * | * | * | * |
| 0 HOURS | STD DEV | | * | * | * | * |
| | SKEWNESS | | * | * | * | * |

| | | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|--------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | | * | * | * | * |
| 0 HOURS | STD DEV | | * | * | * | * |
| | SKEWNESS | | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL P-3C

131 AIRCRAFT 281088 HOURS

NAVY

| | | | | | |
|--------------|----------|-------|-------|-------|-------|
| | TRAINING | 2.06 | 2.56 | 3.06 | 3.56 |
| | ----- | ----- | ----- | ----- | ----- |
| 131 AIRCRAFT | MEAN | 3.26 | .60 | .26 | .14 |
| 280753 HOURS | STD DEV | 7.14 | 2.94 | 1.77 | 1.26 |
| | SKEWNESS | 2.84 | 5.71 | 5.42 | 8.95 |
| | COMBAT | 2.06 | 2.56 | 3.06 | 3.56 |
| | ----- | ----- | ----- | ----- | ----- |
| 2 AIRCRAFT | MEAN | .00 | .00 | .00 | .00 |
| 335 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

MARINE

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | TRAINING | 2.06 | 2.56 | 3.06 | 3.56 |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 2.06 | 2.56 | 3.06 | 3.56 |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL EP-3E

10 AIRCRAFT 7565 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|-------------|----------|------|------|------|------|
| 10 AIRCRAFT | MEAN | 1.88 | .32 | .32 | .16 |
| 7565 HOURS | STD DEV | 2.15 | .70 | .70 | .35 |
| | SKEWNESS | .84 | 1.95 | 1.95 | 1.95 |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL EP-3E

10 AIRCRAFT 23040 HOURS

NAVY

| | | | | | |
|-------------|----------|------|------|------|------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ---- | ---- | ---- | ---- |
| 10 AIRCRAFT | MEAN | 1.90 | .05 | .03 | .01 |
| 23040 HOURS | STD DEV | 2.42 | .48 | .44 | .22 |
| | SKEWNESS | .08 | 2.07 | 2.64 | 2.64 |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ---- | ---- | ---- | ---- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | | | | | |
|------------|----------|------|------|------|------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ---- | ---- | ---- | ---- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ---- | ---- | ---- | ---- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL ES-2D

5 AIRCRAFT 1333 HOURS

NAVY

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ----- | ----- | ----- | ----- |
| 5 AIRCRAFT | MEAN | .54 | .00 | .00 | .00 |
| 1333 HOURS | STD DEV | .91 | .00 | .00 | .00 |
| | SKEWNESS | 1.28 | .00 | .00 | .00 |

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL ES-2D

7 AIRCRAFT 9612 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|-------|------|------|------|
| 7 AIRCRAFT | MEAN | 6.75 | .88 | .24 | .00 |
| 9612 HOURS | STD DEV | 10.01 | 1.07 | .36 | .00 |
| | SKEWNESS | .73 | .32 | .18 | .00 |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL S-3A

105 AIRCRAFT 31219 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|--------------|----------|---------|--------|--------|-------|
| 105 AIRCRAFT | MEAN | 1322.09 | 452.67 | 123.69 | 30.95 |
| 31219 HOURS | STD DEV | 468.28 | 193.11 | 57.72 | 19.06 |
| | SKEWNESS | -1.16 | .32 | .29 | 1.29 |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL S-3A

139 AIRCRAFT 52902 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|--------------|----------|---------|--------|--------|-------|
| 139 AIRCRAFT | MEAN | 1394.25 | 468.03 | 124.10 | 31.39 |
| 52902 HOURS | STD DEV | 585.61 | 226.54 | 64.69 | 18.68 |
| | SKEWNESS | 1.40 | 1.35 | 1.14 | 1.23 |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL T-2B

2 AIRCRAFT 193 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|-------|------|------|------|
| 2 AIRCRAFT | MEAN | 35.04 | .00 | .00 | .00 |
| 193 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL T-2B

90 AIRCRAFT 155114 HOURS

NAVY

| | | | | | |
|--------------|----------|--------|-------|------|------|
| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 90 AIRCRAFT | MEAN | 215.94 | 24.26 | 2.51 | .38 |
| 155114 HOURS | STD DEV | 244.52 | 38.79 | 4.09 | .79 |
| | SKEWNESS | 3.00 | 3.71 | 3.42 | 1.63 |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|------------|----------|------|------|------|------|
| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL T-2C

157 AIRCRAFT 58769 HOURS

NAVY

| | | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|--------------|----------|----------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 157 AIRCRAFT | MEAN | 114.16 | 11.91 | 1.53 | .27 | |
| 58769 HOURS | STD DEV | 72.60 | 9.03 | 2.88 | 1.56 | |
| | SKEWNESS | 1.44 | 1.58 | 4.03 | 8.72 | |

| | | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|--------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * | * |
| | SKEWNESS | * | * | * | * | * |

MARINF

| | | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|----------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * | * |
| | SKEWNESS | * | * | * | * | * |

| | | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|--------|-------|-------|-------|-------|
| | | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * | * |
| | SKEWNESS | * | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL T-2C

180 AIRCRAFT 167812 HOURS

NAVY

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|--------------|----------|--------|-------|------|------|
| 180 AIRCRAFT | MEAN | 105.39 | 10.58 | 1.57 | .21 |
| 167812 HOURS | STD DEV | 107.85 | 10.86 | 3.56 | 1.08 |
| | SKEWNESS | 2.07 | 1.72 | 5.36 | 6.54 |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 5.0G | 6.0G | 7.0G | 8.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL T-28B

53 AIRCRAFT 25235 HOURS

NAVY

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|-------------|----------|--------|-------|------|------|
| 53 AIRCRAFT | MEAN | 316.53 | 32.91 | 1.00 | .11 |
| 25235 HOURS | STD DEV | 228.15 | 44.40 | 1.49 | .44 |
| | SKEWNESS | .25 | 4.26 | 1.99 | 5.40 |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL T-28B

118 AIRCRAFT 489123 HOURS

NAVY

| | | | | | |
|--------------|----------|--------|--------|-------|-------|
| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 118 AIRCRAFT | MEAN | 352.54 | 43.47 | 4.22 | .33 |
| 489123 HOURS | STD DEV | 611.39 | 108.55 | 20.82 | 2.31 |
| | SKEWNESS | .95 | 2.35 | 5.24 | 5.68 |

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL T-28C

17 AIRCRAFT 7838 HOURS

NAVY

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|-------------|----------|--------|-------|------|------|
| 17 AIRCRAFT | MEAN | 219.13 | 20.85 | 1.24 | .15 |
| 7838 HOURS | STD DEV | 249.89 | 24.39 | 1.57 | .35 |
| | SKEWNESS | 1.18 | 1.27 | 1.75 | 3.17 |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL T-28C

57 AIRCRAFT 185794 HOURS

NAVY

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|--------------|----------|---------|--------|-------|------|
| 57 AIRCRAFT | MEAN | 1008.51 | 129.41 | 7.48 | .52 |
| 185794 HOURS | STD DEV | 1169.03 | 176.54 | 11.33 | 1.56 |
| | SKEWNESS | .01 | .49 | 1.16 | 3.44 |
| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL T-34B

23 AIRCRAFT 3025 HOURS

NAVY

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|-------------|----------|--------|-------|------|------|
| 23 AIRCRAFT | MEAN | 243.51 | 19.22 | 1.86 | .00 |
| 3025 HOURS | STD DEV | 277.67 | 17.85 | 2.07 | .00 |
| | SKEWNESS | 3.07 | 2.32 | 2.68 | .00 |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL T-34B

77 AIRCRAFT 202447 HOURS

NAVY

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|--------------|----------|---------|--------|-------|------|
| 77 AIRCRAFT | MEAN | 1376.68 | 204.45 | 19.49 | 1.05 |
| 202447 HOURS | STD DEV | 1496.15 | 246.86 | 24.66 | 4.43 |
| | SKEWNESS | .04 | .40 | .83 | 7.06 |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

DATA FROM
7-76 THRU 6-77

MODEL AV-8A

49 AIRCRAFT 6038 HOURS

MARINE

| | TRAINING | -1.5 G | -.5 G | .25 G | 2.5 G |
|-------------|----------|--------|-------|---------|----------|
| 49 AIRCRAFT | MEAN | 3.70 | 49.89 | 1322.34 | 13441.42 |
| 6038 HOURS | STD DEV | 1.99 | 18.52 | 207.25 | 1574.09 |
| | SKEWNESS | 1.56 | 3.22 | 1.12 | -.07 |

| | | 3.5 G | 5.0 G | 7.0 G | 8.0 G |
|-------------|----------|---------|---------|-------|-------|
| 49 AIRCRAFT | MEAN | 7305.59 | 1817.68 | 44.94 | 3.78 |
| 6038 HOURS | STD DEV | 1003.81 | 349.83 | 23.26 | 3.13 |
| | SKEWNESS | -.14 | .21 | 3.23 | 3.72 |

MARINF

| | COMBAT | -1.5 G | -.5 G | .25 G | 2.5 G |
|------------|----------|--------|-------|-------|-------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | | 3.5 G | 5.0 G | 7.0 G | 8.0 G |
|------------|----------|-------|-------|-------|-------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 6-77

MODEL AV-8A

93 AIRCRAFT 35028 HOURS

MARINE

| | TRAINING | -1.5G | -.5G | .25 G | 2.5 G |
|-------------|----------|---------|---------|--------|----------|
| 93 AIRCRAFT | MEAN | 3.87 | 40.37 | 958.08 | 11072.99 |
| 35028 HOURS | STD DEV | 3.18 | 28.62 | 212.37 | 1693.47 |
| | SKEWNESS | 1.57 | 5.15 | .61 | -.35 |
| | | 3.5 G | 5.0 G | 7.0 G | 8.0 G |
| 93 AIRCRAFT | MEAN | 5847.59 | 1373.42 | 26.09 | 2.04 |
| 35028 HOURS | STD DEV | 983.25 | 283.86 | 16.07 | 1.95 |
| | SKEWNESS | -.50 | .00 | 2.32 | 2.05 |

MARINE

| | COMBAT | -1.5 G | -.5 G | .25 G | 2.5 G |
|------------|----------|--------|-------|-------|-------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | | 3.5 G | 5.0 G | 7.0 G | 8.0 G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

RCS NADC 13920-2

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX A

OUT-OF-SERVICE MODELS AND MODELS WHICH HAVE NOT REPORTED COUNTING
ACCELEROMETER DATA DURING THE PREVIOUS 12 MONTHS

ALL DATA

MODEL F-4J BLUE ANGELS

14 AIRCRAFT 8102 HOURS

| DIAMOND | 6.0G | 7.0G | 8.5G | 10.0G |
|---------|------|------|------|-------|
| ----- | ---- | ---- | ---- | ---- |

| | | | | | |
|-------------|------|--------|--------|-------|------|
| 14 AIRCRAFT | MEAN | 502.35 | 164.78 | 21.16 | 1.73 |
|-------------|------|--------|--------|-------|------|

| | | | | | |
|------------|---------|--------|-------|-------|------|
| 5418 HOURS | STD DEV | 118.81 | 82.68 | 13.94 | 1.23 |
|------------|---------|--------|-------|-------|------|

| | | | | |
|----------|-----|-----|-----|-----|
| SKEWNESS | .22 | .78 | .49 | .53 |
|----------|-----|-----|-----|-----|

| Solo | 6.0G | 7.0G | 8.5G | 10.0G |
|-------|------|------|------|-------|
| ----- | ---- | ---- | ---- | ---- |

| | | | | | |
|-------------|------|---------|--------|--------|-------|
| 10 AIRCRAFT | MEAN | 2220.24 | 797.59 | 143.85 | 12.38 |
|-------------|------|---------|--------|--------|-------|

| | | | | | |
|------------|---------|--------|--------|-------|-------|
| 2684 HOURS | STD DEV | 573.11 | 298.17 | 95.53 | 18.68 |
|------------|---------|--------|--------|-------|-------|

| | | | | |
|----------|------|------|------|------|
| SKEWNESS | -.30 | -.05 | 1.55 | 2.40 |
|----------|------|------|------|------|

| 6.0G | 7.0G | 8.5G | 10.0G |
|-------|------|------|-------|
| ----- | ---- | ---- | ---- |

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | |
|----------|---|---|---|---|
| SKEWNESS | * | * | * | * |
|----------|---|---|---|---|

| 6.0G | 7.0G | 8.5G | 10.0G |
|-------|------|------|-------|
| ----- | ---- | ---- | ---- |

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | |
|----------|---|---|---|---|
| SKEWNESS | * | * | * | * |
|----------|---|---|---|---|

ALL DATA

MODEL F-11A BLUE ANGELS

12 AIRCRAFT 3744 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|---------|--------|--------|
| 12 AIRCRAFT | MEAN | 5414.80 | 1826.99 | 520.71 | 188.84 |
| 3744 HOURS | STD DEV | 2263.48 | 740.91 | 208.44 | 86.14 |
| | SKEWNESS | -.39 | -.65 | -.79 | -.37 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL F-11A BLUE ANGELS

11 AIRCRAFT 4400 HOURS

NAVY

| | TRAINING | 6.0G | 7.0G | 8.5G | 10.0G |
|-------------|----------|--------|--------|-------|-------|
| 11 AIRCRAFT | MEAN | 740.74 | 192.71 | 12.43 | 3.88 |
| 4400 HOURS | STD DEV | 217.97 | 62.76 | 7.33 | 7.05 |
| | SKEWNESS | .19 | .26 | .95 | 2.32 |

| | COMBAT | 6.0G | 7.0G | 8.5G | 10.0G |
|------------|----------|------|------|------|-------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | TRAINING | 6.0G | 7.0G | 8.5G | 10.0G |
|------------|----------|------|------|------|-------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 6.0G | 7.0G | 8.5G | 10.0G |
|------------|----------|------|------|------|-------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL A-1H

28 AIRCRAFT 7290 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--|----------|------|------|------|------|
|--|----------|------|------|------|------|

| | | | | | |
|-------------|------|--------|-------|------|-----|
| 22 AIRCRAFT | MEAN | 263.05 | 94.29 | 6.31 | .00 |
|-------------|------|--------|-------|------|-----|

| | | | | | |
|-----------|---------|----|----|----|----|
| 374 HOURS | STD DEV | ** | ** | ** | ** |
|-----------|---------|----|----|----|----|

| | | | | | |
|--|----------|----|----|----|----|
| | SKEWNESS | ** | ** | ** | ** |
|--|----------|----|----|----|----|

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|--|--------|------|------|------|------|
|--|--------|------|------|------|------|

| | | | | | |
|-------------|------|--------|-------|-------|-----|
| 28 AIRCRAFT | MEAN | 322.42 | 89.29 | 14.84 | .00 |
|-------------|------|--------|-------|-------|-----|

| | | | | | |
|------------|---------|-------|-------|------|-----|
| 6916 HOURS | STD DEV | 77.52 | 27.19 | 6.46 | .00 |
|------------|---------|-------|-------|------|-----|

| | | | | | |
|--|----------|------|------|------|-----|
| | SKEWNESS | 1.14 | 1.22 | 1.07 | .00 |
|--|----------|------|------|------|-----|

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--|----------|------|------|------|------|
|--|----------|------|------|------|------|

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|--|--------|------|------|------|------|
|--|--------|------|------|------|------|

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

ALL DATA

MODEL A-1J

4 AIRCRAFT 917 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 1 AIRCRAFT | MEAN | .00 | .00 | .00 | .00 |
| 32 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|--------|--------|-------|------|
| 4 AIRCRAFT | MEAN | 306.82 | 125.89 | 17.28 | .00 |
| 885 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

MARINF

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL EKA-3B

20 AIRCRAFT 9742 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|-------------|----------|--------|-------|-------|------|
| 19 AIRCRAFT | MEAN | 354.19 | 65.33 | 21.52 | 3.53 |
| 8334 HOURS | STD DEV | 289.18 | 60.88 | 23.25 | 4.26 |
| | SKEWNESS | .85 | 1.77 | 1.98 | 1.96 |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|-------|------|------|------|
| 5 AIRCRAFT | MEAN | 99.38 | 6.56 | .00 | .00 |
| 1408 HOURS | STD DEV | 52.68 | 9.15 | .00 | .00 |
| | SKEWNESS | .71 | 1.36 | .00 | .00 |

MARINF

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL A-4B

58 AIRCRAFT 23177 HOURS

NAVY

| | | | | | |
|-------------|----------|--------|--------|-------|------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 55 AIRCRAFT | MEAN | 681.15 | 238.03 | 49.07 | 7.87 |
| 20376 HOURS | STD DEV | 358.28 | 164.65 | 46.69 | 9.80 |
| | SKEWNESS | .67 | 1.04 | 2.09 | 2.14 |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|------------|----------|--------|-------|-------|------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 8 AIRCRAFT | MEAN | 268.45 | 64.34 | 10.94 | .99 |
| 2800 HOURS | STD DEV | 245.06 | 92.00 | 18.99 | 1.89 |
| | SKEWNESS | .55 | 1.39 | 1.73 | 1.67 |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL TA-4B

10 AIRCRAFT 3976 HOURS

NAVY

| | | | | | |
|-------------|----------|--------|--------|-------|-------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 10 AIRCRAFT | MEAN | 745.68 | 292.32 | 83.97 | 13.39 |
| 3976 HOURS | STD DEV | 480.64 | 221.15 | 68.00 | 17.49 |
| | SKEWNESS | -.03 | .26 | .92 | 1.49 |

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL A-5A

30 AIRCRAFT 11790 HOURS

NAVY

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|-------------|----------|--------|--------|------|------|
| 30 AIRCRAFT | MEAN | 579.58 | 128.26 | 9.04 | .89 |
| 11790 HOURS | STD DEV | 487.22 | 42.19 | 4.68 | 1.00 |
| | SKEWNESS | 4.57 | .57 | .75 | 1.63 |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL A-5B

5 AIRCRAFT 985 HOURS

NAVY

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|--------|-------|-------|-------|
| 5 AIRCRAFT | MEAN | 125.50 | 13.83 | 1.01 | .00 |
| 985 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |
| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|-------|-------|-------|-------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL A-6C

12 AIRCRAFT 7282 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|--------|-------|------|
| 12 AIRCRAFT | MEAN | 960.17 | 311.66 | 15.27 | .89 |
| 6983 HOURS | STD DEV | 460.22 | 159.61 | 13.07 | .77 |
| | SKEWNESS | -.10 | -.38 | .37 | .36 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|--------|--------|-------|------|
| 3 AIRCRAFT | MEAN | 581.03 | 302.66 | 58.59 | 9.70 |
| 299 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL KC-130F

12 AIRCRAFT 17648 HOURS

NAVY

| | | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|--|--|----------|------|------|------|------|
|--|--|----------|------|------|------|------|

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

| | | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|--|--|--------|------|------|------|------|
|--|--|--------|------|------|------|------|

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

MARINE

| | | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|--|--|----------|------|------|------|------|
|--|--|----------|------|------|------|------|

| | | | | | |
|-------------|------|------|-----|-----|-----|
| 12 AIRCRAFT | MEAN | 6.76 | .42 | .08 | .00 |
|-------------|------|------|-----|-----|-----|

| | | | | | |
|-------------|---------|------|-----|-----|-----|
| 17648 HOURS | STD DEV | 5.79 | .51 | .22 | .00 |
|-------------|---------|------|-----|-----|-----|

| | | | | | |
|--|----------|------|-----|------|-----|
| | SKEWNESS | -.38 | .30 | 1.82 | .00 |
|--|----------|------|-----|------|-----|

| | | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|--|--|--------|------|------|------|------|
|--|--|--------|------|------|------|------|

| | | | | | |
|------------|------|---|---|---|---|
| 0 AIRCRAFT | MEAN | * | * | * | * |
|------------|------|---|---|---|---|

| | | | | | |
|---------|---------|---|---|---|---|
| 0 HOURS | STD DEV | * | * | * | * |
|---------|---------|---|---|---|---|

| | | | | | |
|--|----------|---|---|---|---|
| | SKEWNESS | * | * | * | * |
|--|----------|---|---|---|---|

ALL DATA

MODEL AF-1E

21 AIRCRAFT 4527 HOURS

NAVY

| | | | | | |
|-------------|----------|--------|--------|-------|------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| 21 AIRCRAFT | MEAN | 563.04 | 125.53 | 22.27 | 3.60 |
| 4527 HOURS | STD DEV | 200.25 | 52.92 | 16.14 | 4.72 |
| | SKEWNESS | .29 | .61 | 1.63 | 2.00 |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | | | | | |
|------------|----------|------|------|------|------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL F-4A

27 AIRCRAFT 17193 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|--------|-------|-------|
| 27 AIRCRAFT | MEAN | 794.95 | 261.01 | 66.29 | 11.89 |
| 17193 HOURS | STD DEV | 275.55 | 127.26 | 42.65 | 8.70 |
| | SKEWNESS | .09 | .33 | .71 | 1.19 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL TF-4A

4 AIRCRAFT 433 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|--------|-------|------|------|
| 4 AIRCRAFT | MEAN | 135.48 | 23.72 | 3.32 | .00 |
| 433 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL F-6A

46 AIRCRAFT 17986 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|-------|------|------|
| 29 AIRCRAFT | MEAN | 190.91 | 25.88 | 1.99 | .20 |
| 12399 HOURS | STD DEV | 143.14 | 29.94 | 2.18 | .75 |
| | SKEWNESS | 2.41 | 2.60 | 1.96 | 2.92 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|-------|------|------|
| 26 AIRCRAFT | MEAN | 147.15 | 17.74 | .53 | .00 |
| 5587 HOURS | STD DEV | 32.97 | 7.42 | .68 | .00 |
| | SKEWNESS | 1.24 | .80 | 2.11 | .00 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL F-8A

48 AIRCRAFT 33043 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|--------|-------|------|
| 48 AIRCRAFT | MEAN | 678.64 | 171.70 | 32.28 | 5.44 |
| 33043 HOURS | STD DEV | 330.20 | 100.28 | 22.83 | 4.33 |
| | SKEWNESS | .32 | .50 | .75 | 1.38 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL RF-8A

28 AIRCRAFT 20290 HOURS

NAVY

| | | | | | |
|-------------|----------|--------|-------|-------|------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 23 AIRCRAFT | MEAN | 317.32 | 80.22 | 13.37 | 2.05 |
| 15203 HOURS | STD DEV | 120.58 | 36.11 | 7.56 | 1.88 |
| | SKEWNESS | .56 | .52 | .61 | 1.90 |

| | | | | | |
|------------|----------|--------|-------|------|------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 4 AIRCRAFT | MEAN | 221.00 | 34.00 | 5.73 | 5.73 |
| 355 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

MARINE

| | | | | | |
|-------------|----------|--------|-------|------|------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 10 AIRCRAFT | MEAN | 151.04 | 28.24 | 4.41 | .56 |
| 4725 HOURS | STD DEV | 49.30 | 13.23 | 3.03 | .99 |
| | SKEWNESS | -.68 | .20 | .42 | 1.68 |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 1 AIRCRAFT | MEAN | .00 | .00 | .00 | .00 |
| 6 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

ALL DATA

MODEL TF-8A

30 AIRCRAFT 4924 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|--------|-------|-------|
| 30 AIRCRAFT | MEAN | 1274.72 | 393.67 | 82.63 | 14.88 |
| 4924 HOURS | STD DEV | 354.70 | 139.02 | 33.41 | 6.09 |
| | SKEWNESS | .88 | 2.10 | 2.48 | .98 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL F-8B

53 AIRCRAFT 40015 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|--------|-------|------|
| 46 AIRCRAFT | MEAN | 813.00 | 203.68 | 34.52 | 3.65 |
| 29272 HOURS | STD DEV | 316.12 | 100.90 | 23.43 | 3.94 |
| | SKEWNESS | .99 | 1.13 | 1.73 | 2.98 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINF

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|--------|-------|------|
| 36 AIRCRAFT | MEAN | 778.09 | 148.63 | 19.24 | 2.49 |
| 10743 HOURS | STD DEV | 188.70 | 53.00 | 9.18 | 2.34 |
| | SKEWNESS | 1.26 | 1.68 | 1.46 | 2.06 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL F-8C

87 AIRCRAFT 76054 HOURS

NAVY

| | | | | | |
|-------------|----------|--------|--------|-------|------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 78 AIRCRAFT | MEAN | 875.42 | 217.67 | 38.78 | 4.89 |
| 53012 HOURS | STD DEV | 534.39 | 164.74 | 37.06 | 6.76 |
| | SKEWNESS | 1.20 | 1.14 | 1.60 | 2.57 |

| | | | | | |
|-------------|----------|--------|--------|-------|------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 11 AIRCRAFT | MEAN | 848.92 | 194.84 | 49.77 | 6.46 |
| 1689 HOURS | STD DEV | 575.01 | 119.04 | 27.36 | 6.78 |
| | SKEWNESS | .22 | .30 | .17 | 1.45 |

MARINF

| | | | | | |
|-------------|----------|---------|--------|-------|-------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 37 AIRCRAFT | MEAN | 1217.83 | 346.89 | 67.32 | 10.17 |
| 20851 HOURS | STD DEV | 370.14 | 107.60 | 22.36 | 4.73 |
| | SKEWNESS | 1.83 | 1.60 | 1.66 | .05 |

| | | | | | |
|-------------|----------|--------|--------|-------|------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 11 AIRCRAFT | MEAN | 748.69 | 333.97 | 61.52 | 9.71 |
| 502 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

ALL DATA

MODEL F-8D

101 AIRCRAFT 70988 HOURS

NAVY

| | | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|----------|--------|-------|-------|------|
| | | ----- | ---- | ---- | ---- | ---- |
| 93 AIRCRAFT | MEAN | 1176.54 | 326.40 | 68.29 | 11.47 | |
| 49588 HOURS | STD DEV | 490.92 | 154.19 | 37.61 | 7.70 | |
| | SKEWNESS | .55 | .48 | .72 | 1.25 | |

| | | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|--------|--------|-------|------|
| | | ----- | ---- | ---- | ---- | ---- |
| 15 AIRCRAFT | MEAN | 1380.67 | 394.15 | 107.24 | 22.87 | |
| 1060 HOURS | STD DEV | 468.87 | 79.59 | 21.81 | 6.83 | |
| | SKEWNESS | 2.59 | .29 | .19 | .71 | |

MARINE

| | | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|----------|--------|-------|------|------|
| | | ----- | ---- | ---- | ---- | ---- |
| 46 AIRCRAFT | MEAN | 826.64 | 216.72 | 45.39 | 8.03 | |
| 19583 HOURS | STD DEV | 398.11 | 118.51 | 30.75 | 5.85 | |
| | SKEWNESS | .83 | .90 | 1.13 | 1.50 | |

| | | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|-------|------|------|------|
| | | ----- | ---- | ---- | ---- | ---- |
| 11 AIRCRAFT | MEAN | 546.18 | 88.42 | 8.42 | 4.32 | |
| 758 HOURS | STD DEV | ** | ** | ** | ** | |
| | SKEWNESS | ** | ** | ** | ** | |

ALL DATA

MODEL F-8E

248 AIRCRAFT 198601 HOURS

NAVY

| | | | | | |
|--------------|----------|---------|--------|--------|-------|
| | TRAINING | 4.06 | 5.06 | 6.06 | 7.06 |
| | ----- | ---- | ---- | ---- | ---- |
| 243 AIRCRAFT | MEAN | 1994.36 | 610.43 | 131.38 | 19.66 |
| 125946 HOURS | STD DEV | 717.23 | 205.58 | 53.09 | 11.45 |
| | SKEWNESS | 1.87 | 1.50 | 1.62 | 2.23 |

| | | | | | |
|--------------|----------|---------|--------|-------|-------|
| | COMBAT | 4.06 | 5.06 | 6.06 | 7.06 |
| | ----- | ---- | ---- | ---- | ---- |
| 103 AIRCRAFT | MEAN | 1074.97 | 372.62 | 92.68 | 17.22 |
| 27936 HOURS | STD DEV | 193.19 | 101.22 | 41.20 | 15.20 |
| | SKEWNESS | .06 | .97 | 3.20 | 5.50 |

MARINF

| | | | | | |
|-------------|----------|---------|--------|-------|-------|
| | TRAINING | 4.06 | 5.06 | 6.06 | 7.06 |
| | ----- | ---- | ---- | ---- | ---- |
| 88 AIRCRAFT | MEAN | 1551.79 | 453.60 | 92.16 | 15.17 |
| 26217 HOURS | STD DEV | 451.22 | 138.34 | 35.57 | 9.01 |
| | SKEWNESS | .49 | .04 | .50 | 1.61 |

| | | | | | |
|-------------|----------|---------|--------|--------|-------|
| | COMBAT | 4.06 | 5.06 | 6.06 | 7.06 |
| | ----- | ---- | ---- | ---- | ---- |
| 52 AIRCRAFT | MEAN | 1334.99 | 460.44 | 118.91 | 19.35 |
| 18501 HOURS | STD DEV | 373.38 | 123.04 | 28.68 | 8.02 |
| | SKEWNESS | 3.39 | .45 | .60 | 1.58 |

ALL DATA

MODEL DF-8F

13 AIRCRAFT 9599 HOURS

NAVY

| | | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|----------|-------|-------|------|------|
| 13 AIRCRAFT | MEAN | 405.48 | 91.31 | 11.23 | .82 | |
| 9599 HOURS | STD DEV | 271.17 | 85.23 | 15.41 | 1.65 | |
| | SKEWNESS | .49 | .76 | 1.93 | 1.35 | |

| | | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|--------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * | |
| 0 HOURS | STD DEV | * | * | * | * | |
| | SKEWNESS | * | * | * | * | |

MARINF

| | | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * | |
| 0 HOURS | STD DEV | * | * | * | * | |
| | SKEWNESS | * | * | * | * | |

| | | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|--------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * | |
| 0 HOURS | STD DEV | * | * | * | * | |
| | SKEWNESS | * | * | * | * | |

ALL DATA

MODEL F-8H

87 AIRCRAFT 85490 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|--------|--------|-------|
| 87 AIRCRAFT | MEAN | 1664.03 | 519.64 | 101.80 | 13.61 |
| 72270 HOURS | STD DEV | 557.82 | 191.35 | 46.31 | 9.47 |
| | SKEWNESS | .36 | .78 | .74 | 1.31 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|--------|--------|-------|------|
| 45 AIRCRAFT | MEAN | 711.67 | 197.56 | 41.43 | 6.17 |
| 13220 HOURS | STD DEV | 254.48 | 82.47 | 19.81 | 4.49 |
| | SKEWNESS | 2.35 | 2.77 | 2.28 | 1.32 |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 12-76

MODEL F8K

74 AIRCRAFT 41773 HOURS

NAVY

| | TRAINING | 4.0 G | 5.0 G | 6.0 G | 7.0 G |
|-------------|----------|---------|--------|--------|-------|
| 74 AIRCRAFT | MEAN | 1659.73 | 518.96 | 111.98 | 13.66 |
| 41660 HOURS | STD DEV | 745.33 | 247.92 | 60.18 | 9.15 |
| | SKEWNESS | 1.63 | 2.37 | 3.61 | 1.41 |

| | COMBAT | 4.0 G | 5.0 G | 6.0 G | 7.0 G |
|------------|----------|---------|---------|--------|-------|
| 3 AIRCRAFT | MEAN | 4194.50 | 1576.92 | 208.63 | 24.88 |
| 113 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

MARINE

| | TRAINING | 4.0 G | 5.0 G | 6.0 G | 7.0 G |
|------------|----------|-------|-------|-------|-------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0 G | 5.0 G | 6.0 G | 7.0 G |
|------------|----------|-------|-------|-------|-------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL F-8L

36 AIRCRAFT 9856 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|-------------|----------|---------|--------|--------|-------|
| 36 AIRCRAFT | MEAN | 1711.41 | 498.06 | 122.95 | 19.19 |
| 9856 HOURS | STD DEV | 427.64 | 204.07 | 66.52 | 13.14 |
| | SKEWNESS | .81 | .84 | 1.31 | 1.17 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL EF-108

16 AIRCRAFT 9853 HOURS

NAVY

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 3.0G | 4.0G | 5.0G | 6.0G |
|-------------|----------|-------|------|------|------|
| 14 AIRCRAFT | MEAN | 16.24 | .00 | .00 | .00 |
| 7526 HOURS | STD DEV | 10.06 | .00 | .00 | .00 |
| | SKEWNESS | -.59 | .00 | .00 | .00 |

| | COMBAT | 3.0G | 4.0G | 5.0G | 6.0G |
|-------------|----------|-------|------|------|------|
| 10 AIRCRAFT | MEAN | 45.06 | 2.22 | .00 | .00 |
| 2327 HOURS | STD DEV | 20.68 | 4.09 | .00 | .00 |
| | SKEWNESS | 2.16 | 2.52 | .00 | .00 |

ALL DATA

MODEL F-11A

36 AIRCRAFT 22538 HOURS

NAVY

| | | | | | |
|-------------|----------|---------|--------|-------|-------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 36 AIRCRAFT | MEAN | 2796.39 | 593.37 | 80.02 | 10.38 |
| 22538 HOURS | STD DEV | 916.87 | 259.16 | 60.36 | 10.36 |
| | SKEWNESS | 1.30 | 1.37 | 3.46 | 3.50 |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | | | | | |
|------------|----------|------|------|------|------|
| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | | | | | |
|------------|----------|------|------|------|------|
| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
| | ----- | ---- | ---- | ---- | ---- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA
1-62 THRU 12-76

MODEL WP3A

4 AIRCRAFT 10059 HOURS

NAVY

| | | TRAINING | 2.0 G | 2.5 G | 3.0 G | 3.5 G |
|-------------|----------|----------|-------|-------|-------|-------|
| 4 AIRCRAFT | MEAN | 2.65 | .11 | .11 | .00 | |
| 10059 HOURS | STD DEV | 1.56 | .30 | .30 | .00 | |
| | SKEWNESS | .31 | .62 | .62 | .00 | |
| | | COMBAT | 2.0 G | 2.5 G | 3.0 G | 3.5 G |
| 0 AIRCRAFT | MEAN | * | * | * | * | |
| 0 HOURS | STD DEV | * | * | * | * | |
| | SKEWNESS | * | * | * | * | |

MARINE

| | | TRAINING | 2.0 G | 2.5 G | 3.0 G | 3.5 G |
|------------|----------|----------|-------|-------|-------|-------|
| 0 AIRCRAFT | MEAN | * | * | * | * | |
| 0 HOURS | STD DEV | * | * | * | * | |
| | SKEWNESS | * | * | * | * | |
| | | COMBAT | 2.0 G | 2.5 G | 3.0 G | 3.5 G |
| 0 AIRCRAFT | MEAN | * | * | * | * | |
| 0 HOURS | STD DEV | * | * | * | * | |
| | SKEWNESS | * | * | * | * | |

ALL DATA

MODEL S-2D

67 AIRCRAFT 59015 HOURS

NAVY

| | | | | | |
|-------------|----------|-------|-------|-------|-------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ----- | ----- | ----- | ----- |
| 67 AIRCRAFT | MEAN | 33.25 | 7.71 | 1.77 | .74 |
| 58445 HOURS | STD DEV | 34.30 | 9.23 | 5.36 | 4.85 |
| | SKEWNESS | 1.72 | 1.98 | 6.51 | 7.25 |

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ----- | ----- | ----- | ----- |
| 8 AIRCRAFT | MEAN | 25.35 | 2.10 | .00 | .00 |
| 570 HOURS | STD DEV | ** | ** | ** | ** |
| | SKEWNESS | ** | ** | ** | ** |

MARINF

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | | | | | |
|------------|----------|-------|-------|-------|-------|
| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
| | ----- | ----- | ----- | ----- | ----- |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL S-2E

230 AIRCRAFT 598341 HOURS

NAVY

| | | | | | |
|--------------|----------|--------|-------|------|------|
| | TRAINING | 2.06 | 2.56 | 3.06 | 3.56 |
| 230 AIRCRAFT | MEAN | 71.20 | 12.72 | 2.91 | 1.05 |
| 569460 HOURS | STD DEV | 265.44 | 42.40 | 7.19 | 3.56 |
| | SKEWNESS | 5.23 | 8.57 | 2.30 | 2.56 |
| | COMBAT | 2.06 | 2.56 | 3.06 | 3.56 |
| 65 AIRCRAFT | MEAN | 40.67 | 7.47 | 1.14 | .42 |
| 28881 HOURS | STD DEV | 67.96 | 7.95 | 1.70 | 1.33 |
| | SKEWNESS | 5.07 | 2.05 | 2.66 | 5.00 |

MARINE

| | | | | | |
|------------|----------|------|------|------|------|
| | TRAINING | 2.06 | 2.56 | 3.06 | 3.56 |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |
| | COMBAT | 2.06 | 2.56 | 3.06 | 3.56 |
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL S-2G

48 AIRCRAFT 56173 HOURS

NAVY

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|-------------|----------|--------|-------|------|------|
| 48 AIRCRAFT | MEAN | 48.11 | 7.97 | 2.54 | 1.27 |
| 56173 HOURS | STD DEV | 117.63 | 14.88 | 6.79 | 3.89 |
| | SKEWNESS | 5.18 | 2.04 | 2.57 | 2.71 |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 2.0G | 2.5G | 3.0G | 3.5G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

ALL DATA

MODEL T-2A

147 AIRCRAFT 584869 HOURS

NAVY

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|--------------|----------|--------|-------|------|------|
| 147 AIRCRAFT | MEAN | 591.14 | 44.72 | 4.84 | .89 |
| 584869 HOURS | STD DEV | 446.55 | 58.91 | 6.48 | 2.09 |
| | SKEWNESS | .74 | 1.99 | 1.83 | 2.81 |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

MARINE

| | TRAINING | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

| | COMBAT | 4.0G | 5.0G | 6.0G | 7.0G |
|------------|----------|------|------|------|------|
| 0 AIRCRAFT | MEAN | * | * | * | * |
| 0 HOURS | STD DEV | * | * | * | * |
| | SKEWNESS | * | * | * | * |

RCS NADC 13920-2

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX B

THE DETERMINATION OF SAMPLE STATISTICS
FOR COUNTING ACCELEROMETER DATA

APPENDIX B

Subj: The Determination of Sample Statistics for Counting Accelerometer Data

Ref: (a) Browlee, K.A., "Statistical Theory and Methodology in Science and Engineering," Wiley 1965, pp. 358-359
 (b) Dixon & Massey, Introduction to Statistical Analysis, McGraw-Hill, Second Edition, 1957, pp. 194-195

1. The purpose of this appendix is to describe the methods used at NAVAIRDEV CEN in calculating statistics describing counting accelerometer data. The subsequent outlined sequence is repeated for each aircraft model, for each mission category, and for each g-level where there is sufficient data.

2. These are the methods used for determining sample statistics. Consider a scatter diagram of cumulative counts (at any g-level) vs. flight hours,

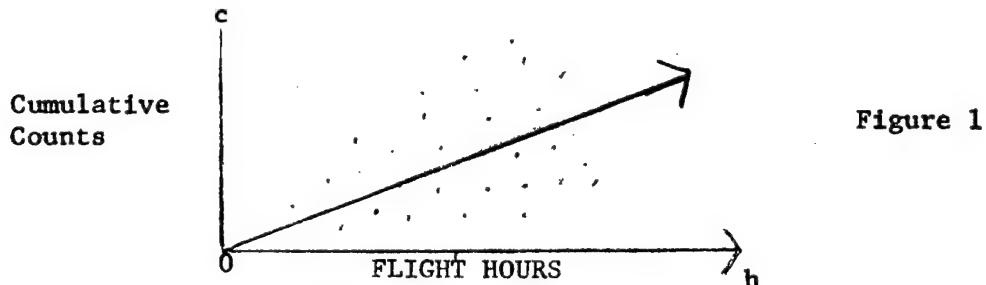


Figure 1

where each dot represents the cumulative counts and flight hours accrued by an individual serial number which is flying or has flown.

Let h_i be the total quality control accepted flight hours for the i^{th} plane ($i=1, 2, \dots, N$)

Let c_i be the cumulative counts during the h_i hours for the i^{th} plane ($i=1, 2, \dots, N$)

N is the total number of aircraft of this model and mission category for which there is recorded information.

Then

$$(1) b = \frac{\sum_{i=1}^N c_i h_i}{\sum_{i=1}^N h_i^2} \quad \text{where } b \text{ is slope of line (Figure 1) through origin fitted by least squares.}$$

$$(2) \bar{x} = 1000b \quad \text{estimated mean load exceedances at 1000 hours}$$

$$(3) \bar{h} = \frac{\sum_{i=1}^N h_i}{N} \quad \text{average flight hours}$$

$$(4) \hat{\sigma}_{ch}^2 = \frac{\sum_{i=1}^N (c_i - \bar{h}h_i)^2}{N-1} \quad \text{estimator of the population standard error squared of the regression}$$

$$\hat{\sigma}_{ch} = \sqrt{\hat{\sigma}_{ch}^2} \quad \text{estimator of the population standard error of the regression}$$

$$(5) S = \sqrt{1000 \frac{\hat{\sigma}_{ch}^2}{h}} \quad \text{estimated standard deviation (counts at 1000 hours) of the load exceedances for each g-level}$$

$$(6) A_3 = \frac{\sum_{i=1}^N (c_i - \bar{h}h_i)^3}{N \hat{\sigma}_{ch}^3} \quad \text{estimated skewness}$$

3. The following is the explanation and justification for these methods:

Aircraft which do not have any flight hours must have zero counts; therefore, the line in figure 2 must go through (0,0). Brownlee (reference (a)) describes the methods for fitting a least squares line through the origin (0,0). The slope of this line is the estimated mean exceedance rate (per hour). Multiplying this rate by 1000 will result in exceedances at 1000 hours (equation (2)). Multiplying b by any other h number of hours will result in mean exceedances at h hours.

If the data in figure 1 were separated into flight hour intervals (see figure 2) and the standard error in each interval were plotted against average flight hours (see figure 3) in that interval, the resultant curve is assumed to have the square root functional form.* Due to limitations in sample size, these individual $\hat{\sigma}$'s could not be determined accurately; thus, it was necessary to calculate a single $\hat{\sigma}_{ch}$ for all h combined and apply it at \bar{h} .** Equation (5) uses figure 3 to convert $\hat{\sigma}_{ch}$ at \bar{h} to S at 1000 hours.

* This is partially justified by the fact that the variance of a sum of independent random variables is equal to the sum of the independent variances. Unreported statistical tests performed at NAVAIRDEVCE show that figure 3 is a reasonable fit to actual data. It should be noted that the $\hat{\sigma}$'s in figure 2 are estimated by equation (4), but each $\hat{\sigma}$ was calculated using the data points in the respective interval.

**The estimated standard error $\hat{\sigma}_{ch}$ is used as the standard error of estimate for a hypothetical distribution of planes all having \bar{h} hours. This follows from work in reference (b).

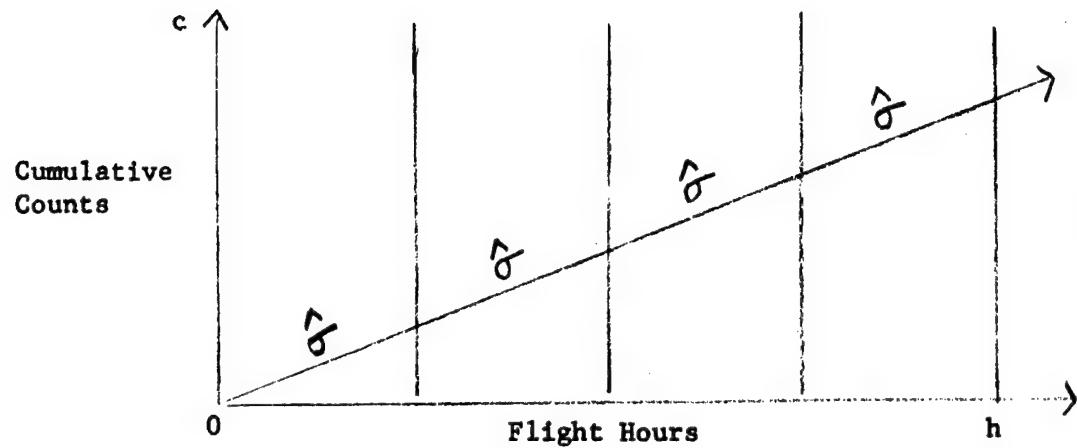


FIGURE 2

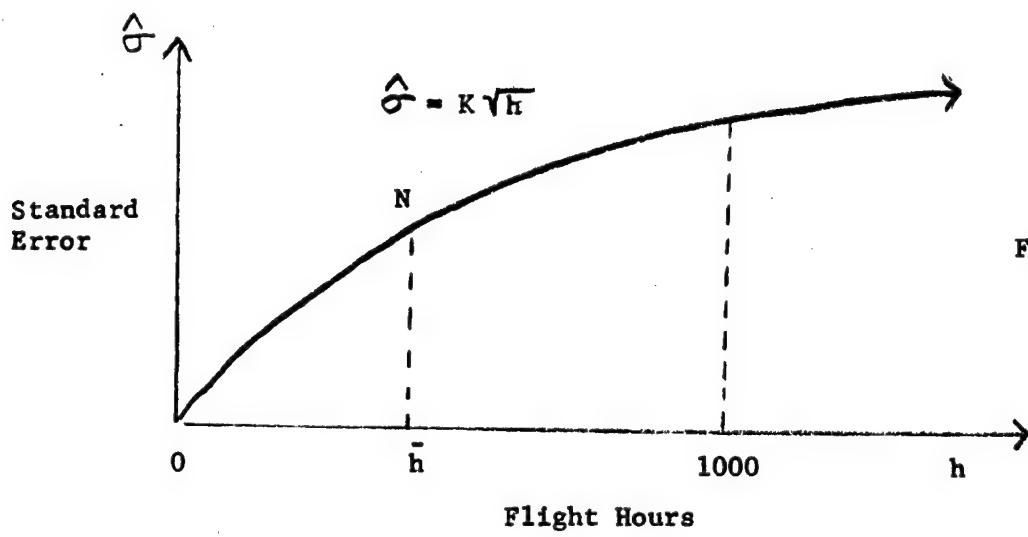


FIGURE 3

If one wanted the standard error at some other value of hours h , he would simply replace 1000 in equation (5) by that value of hours h , and the appropriate standard error would result.

Skewness A_3 is computed in equation (6). This measure indicates whether more airplane load exceedances are above the mean line or below the mean line. If:

- $A_3 < 0$ More load exceedances are above mean line than below
- $A_3 = 0$ Equal number of load exceedances above and below mean
- $A_3 > 0$ More load exceedances are below mean line than above

(Strictly speaking a distribution is symmetrical only if all its odd moments are zero; however, the above statement is approximately true.)

4. For ease of computation, equation (4) can be expanded as follows:

$$(N-1) \hat{\sigma}_{ch}^2 = \sum_{i=1}^N (c_i - bh_i)^2$$

$$(N-1) \hat{\sigma}_{ch}^2 = \sum_{i=1}^N (c_i^2 - 2bc_i h_i + b^2 h_i^2)$$

$$(7) (N-1) \hat{\sigma}_{ch}^2 = \sum_{i=1}^N c_i^2 - 2b \sum_{i=1}^N c_i h_i + b^2 \sum_{i=1}^N h_i^2$$

but

$$b = \frac{\sum_{i=1}^N c_i h_i}{\sum_{i=1}^N h_i^2}$$

and (7) can be reduced to

$$(N-1) \hat{\sigma}_{ch}^2 = \sum_{i=1}^N c_i^2 - 2b \sum_{i=1}^N c_i h_i + b \frac{\sum_{i=1}^N c_i h_i \sum_{i=1}^N h_i^2}{\sum_{i=1}^N h_i^2}$$

then

$$(8) \hat{\sigma}_{ch}^2 = \left(\sum_{i=1}^N c_i^2 - b \sum_{i=1}^N c_i h_i \right) / (N-1)$$

Equation (8) will be used in lieu of equation (4) in determining $\hat{\sigma}_{ch}^2$.

5. An example using training Navy data, 12 airplanes 4.0G level:

| <u>Number</u> | <u>Counts (c_i)</u> | <u>Hours (h_i)</u> |
|---------------|-------------------------------|------------------------------|
| 1 | 1567 | 1341.7 |
| 2 | 649 | 618.2 |
| 3 | 1114 | 1100.8 |
| 4 | 5 | 27.3 |
| 5 | 768 | 691.7 |
| 6 | 23 | 139.6 |
| 7 | 396 | 555.1 |
| 8 | 718 | 831.3 |
| 9 | 854 | 839.1 |
| 10 | 536 | 695.4 |
| 11 | 910 | 775.3 |
| 12 | 160 | 233.0 |

The following are tabulated:

$$\sum_{i=1}^N h_i = 7848.5$$

$$\sum_{i=1}^N c_i = 7700$$

$$\sum_{i=1}^N c_i h_i = 6913341.6$$

$$\sum_{i=1}^N h_i^2 = 6735017.87$$

$$\sum_{i=1}^N c_i^2 = 7250716.00$$

$$\sum_{i=1}^N (c_i - bh_i)^3 = -7082690$$

and are used in the following equations:

$$(1) \quad b = \frac{6913341.6}{6735017.87} = 1.02647 \text{ cts. per hr.}$$

$$(2) \quad \bar{x} = 1000 (1.02647) = 1026.47 \text{ cts. at 1000 hours}$$

$$(3) \quad \bar{h} = \frac{7848.5}{12} = 654.04 \text{ hours}$$

$$(8) \quad \hat{\sigma}_{ch}^2 = \frac{7250716 - 1.02647 (6913341.6)}{11} = 14034 \quad \hat{\sigma}_{ch} = 118.5$$

$$(5) \quad S = \sqrt{1000 (14034)/654} = 146.46 \text{ cts. at 1000 hours.}$$

$$(6) \quad A_3 = \frac{-7082690}{12 (118.5)^3} = -.36$$

RCS NADC 13920-2

THIS PAGE INTENTIONALLY LEFT BLANK

DISTRIBUTION LIST (Concluded)

REPORT CONTROL SYMBOL NADC 13920-2

| No. of Copies | | |
|---|--------------|-----------------|
| CNATRA (Code 511) | | |
| Commander, Naval Air Reserve, Naval Air Station, Glenview, IL | | |
| NRL, Washington, DC. | | |
| Naval Aviation Logistics Center, Patuxent | | |
| River, MD. | | |
| NAVPLANTREPO, Bethpage, NY | | |
| NAVPLANTREPO, Burbank, CA. | | |
| NAVPLANTREPO, Columbus, OH | | |
| NAVPLANTREPO, Dallas, TX | | |
| NAVPLANTREPO, Long Beach, CA | | |
| AFPLANTREPO, St. Louis, MO | | |
| ASD, WPAFB, OH (Code ENFSR). | | |
| AFFDL, WPAFB, OH (Code FBE). | | |
| National Aviation Facilities | Date Due | |
| Atlantic City, NJ (Code RI) | U 840 0394 | |
| DDC. | N.A.D.C. | |
| Boeing Co., Renton, WA (Attr) | NADC-13920-2 | |
| Grumman Aerospace Corporatio | | |
| Lockheed Aircraft Corporatio | | |
| Ling-Temco-Vought Corporatio | | |
| (Attn: L. Boswell) | DATE DUE | BORROWER'S NAME |
| (Attn: J. Pimm-Code 2-53) | | |
| McDonnell Douglas Corporati | | |
| Library. | | |
| McDonnell Douglas Corporati | | |
| (Attn: G. Parker) | | |
| Rockwell International Corp | | |
| (Attn: J. J. Gruff) | | |
| Battelle Memorial Institut | | |
| Brooks AFB, School of Avia | | |
| Technology, Inc., Dayton, | | |
| Naval Post Graduate School | | |
| Naval Air Systems Command | | |

NAVAL GENERAL LIBRARIES
Chief of Naval Education
and Training